Scout Report sent	☑
Noted in the NID File	☐
Location map pinned	☑ unit
Approval or Disapproval Letter	☑
Date Completed, P. & A. or operations suspended	1-59 SIGW UOR
Pin changed on location map	☐
Affidavit and Record of A & P	☐
Water Shut-Off Test	☐
Gas-Oil Ratio Test	☐
Well Log Filed	☐

Bond filed 2-2-59

See Blanket Bond File

1-11-61 As of Oct. 1961 This well was transferred to gas Disp.

FILE NO 5

[illegible] File	✓	Checked by Chief	
[illegible] Sheet	✓	Copy N I D to Field Office	✓
[illegible] Map Pinned	✓	Approval Letter	✓
C[illegible]ard	✓	Disapproval Letter	
I W R for State or Fee Land			

COMPLETION DATA:

Date Well Completed 4/16/59 — Location Inspected

OW WW TA — Bond released

GW ✓ OS PA — State of Fee Land

LOGS FILED Well History

Driller's Log 10/23/59

Electric Logs (No.) 4

E ✓ I E-I ✓ GR ✓ GR-N Micro ✓

Lat Mi-L Sonic ✓ Others

All taken over by Tennaco Oil Co.

July, 1967

Effective 12-8-71, Gas Producing Enterprises. has purchased from Tennaco Oil this well.

Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office UTAH
Lease No. U-01191
Unit UTE TRAIL

(*SUBMIT IN TRIPLICATE*)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 12, 1959

Well No. 1 is located 660 ft. from {S} line and 660 ft. from {W} line of sec. 4

SWSW-4 (¼ Sec. and Sec. No.) 10-S (Twp.) 23-E (Range) SLM (Meridian)

Ute Trail Unit (Field) Uintah (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is ______ ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

8500' Mesaverde test. Estimated top of Wasatch 4300 feet. 300' of 10-3/4 Surface, cemented to Surface. Production string 5½ O.D. Casing. Will run 7-5/8" casing through Green River lost circulation zones, if needed.

Approved Jan. 12, 1959.
Chas A Hauptman
Petr. Engr.

[illegible stamp]

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company DeKalb Agricultural Association, Inc.

Address 306 Lubbock National Bank Bldg.
Lubbock, Texas

By Paul Pugh Paul Pugh

Title Vice President

January 13, 1959

DeKalb Agricultural Association, Inc.
306 Lubbock National Bank Building
Lubbock, Texas

Attention: Mr. Paul Pugh, Vice President

Gentlemen:

This is to acknowledge receipt of your notice of intention to drill Well No. Ute Trail Unit 1, which is to be located 660 feet from the south line and 660 feet from the west line of Section 4, Township 10 South, Range 22 East, SLBM, Uintah County, Utah.

Please be advised that insofar as this office is concerned, approval to drill said well is hereby granted.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
EXECUTIVE SECRETARY

CBF:co

cc: Don Russell, Dist. Eng.
U.S.G.S. Federal Bldg.
Salt Lake City, Utah

Utah State Land Board
Room 105, State Capitol Bldg.
Salt Lake City, Utah

DEKALB
Agricultural Association, Inc.
COMMERCIAL PRODUCERS AND DISTRIBUTORS OF AGRICULTURAL PRODUCTS

DEKALB AGRICULTURAL ASSN., INC.
P. O. BOX 233
VERNAL, UTAH

TEXAS - NEW MEXICO OIL DIVISION
ROOM 306 LUBBOCK NATIONAL BANK BUILDING
TELEPHONE POrter 5-5704 — LUBBOCK, TEXAS

February 2, 1959

Utah Oil and Gas Conservation Commission
310 Newhouse Building
Salt Lake City, 11, Utah

ATTENTION: Mr. C. B. Feight

Gentlemen:

Enclosed herewith please find a State wide Blanket Drilling Bond in favor of the State of Utah executed by the United States Fidelity and Guaranty Company as surety forwarded to you for your files.

This bond is filed in connection with the Operations of DeKalb Agricultural Assn., Inc., Oil and Gas Division, in the State of Utah.

Yours very truly,

DEKALB AGRICULTURAL ASSN., INC.
Oil and Gas Division

W. C. Montgomery, Jr.
Landman

WCM/cc
Encl.

Form 9-331a
(Feb. 1951)

AME D NOTICE OF INTENTION TO DRILL

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office Salt Lake City
Lease No. U-01196
Unit Ute Trail Unit
DeKalb # 1

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

February 4, 19 59

Well No. 1 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 8

NE/4 of NE/4 of Sec. 8 (¼ Sec. and Sec. No.) 10 South (Twp.) 22 East (Range) SLB&M (Meridian)

Ute Trail Unit (Undesignated) (Field) Uintah (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is 5010 ft. 4999' Ground

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spud in Uinta Formation: Estimated formation tops: Green River 1250', Wasatch 4575', Mesa Verde 6650'.
Surface Casing: Set approximately 300' of 13-3/8", J-55, 54.5# Csg., w/225 sacks cement.
Production Casing: Will set 8-5/8" casing through Green River lost circulation zones if Necessary. Will set approximately 8500' of 5-1/2", J-55, 17# and 15.5# casing w/1125 sacks cement.
Will drill with water to approximately 4500' and with native mud and aquagel to total depth.

AMENDED LOCATION to a previously filed Notice of Intention to drill which was filed to drill in Section 4, T-10-S, R-22-E.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company DEKALB AGRICULTURAL ASSN., INC.

Address P. O. Box 523

Vernal, Utah

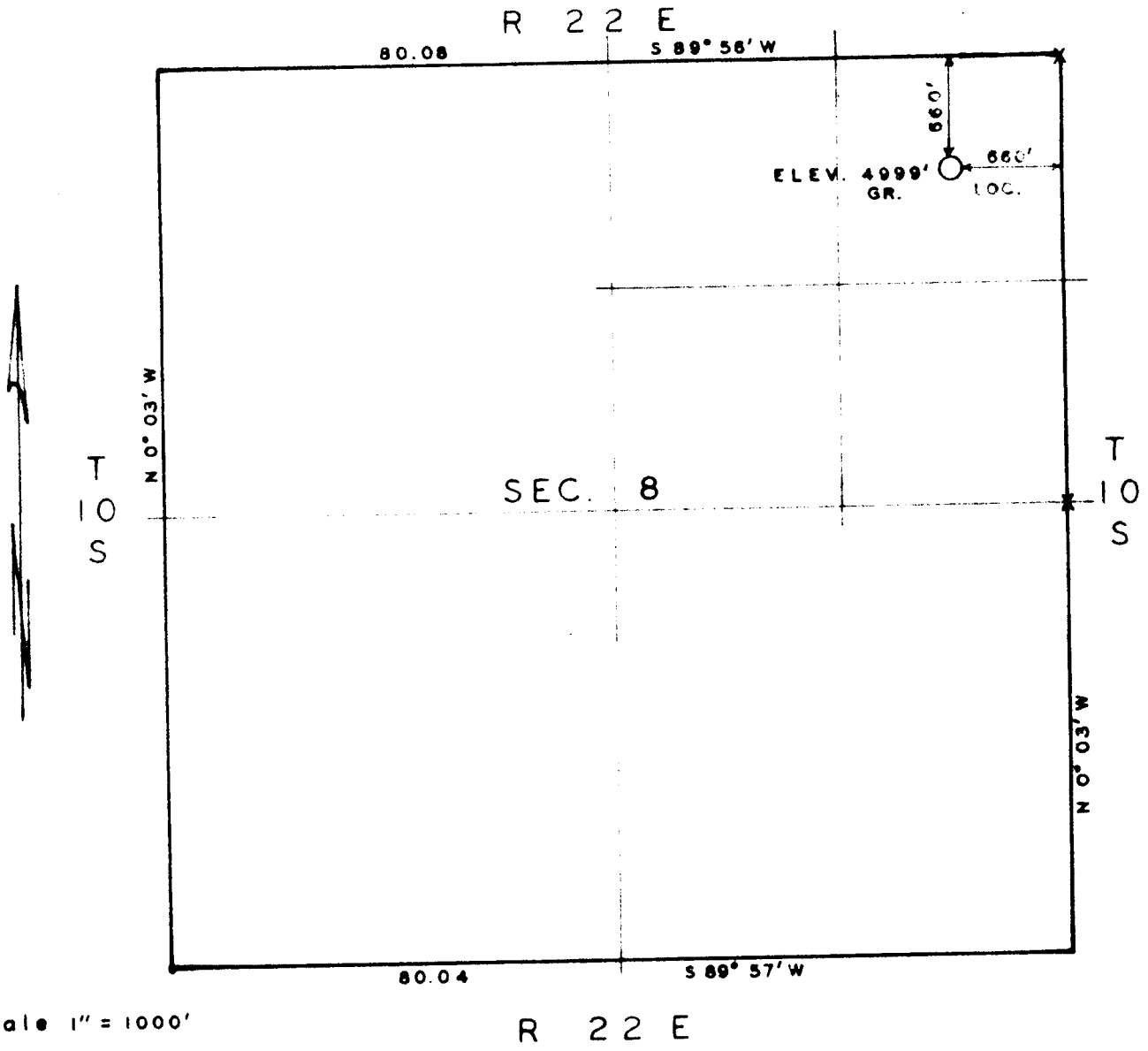
By Paul Pugh Paul Pugh

Title Vice President

GPO 9 18 507

DE KALB AGRICULTURAL ASSOCIATION INC.

WELL NO. 1 ETL.



Scale 1" = 1000'

Corners found (X)

ELEV. taken from Havenstrite Well Ute Trail Unit 83 X - 9H

ROSS CONSTRUCTION CO.
VERNAL, UTAH

PARTY N. MARSHALL M. SLAUGH WEATHER FAIR	SURVEY DEKALB AGRICULTURAL ASSOCIATION INC. WELL NO. 1 ETL. LOCATED 660' FEL & 660' FNL SEC. 8, T 10 S, R 22 E, S.L.B. & M.	DATE 28 JAN. 1959 REFERENCES G.L.O PLAT FILE DE KALB

FORM 52

February 5, 1959

DeKalb Agricultural Association, Inc.
P. O. Box 523
Vernal, Utah

Attention: Paul Pugh, Vice President

Gentlemen:

This is to acknowledge receipt of your amended notice of intention to drill Well No. Ute Tribal Unit 1.

Please be advised that insofar as this office is concerned approval to drill said well 660 feet from the north line and 660 feet from the east line of Section 8, Township 10 South, Range 22 East, SLBM, Uintah County, Utah, is hereby granted.

Our approval of January 13, 1959, to drill this well 660 feet from the south line and 660 feet from the west line of Section 4, Township 10 South, Range 22 East, SLBM, is hereby cancelled.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
EXECUTIVE SECRETARY

CBF:co

cc: Don Russell, Dist. Eng.
U.S.G.S. Federal Bldg.
Salt Lake City, Utah

Budget Bureau No. 42-R356.4.
Approval expires 12-31-55.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE Salt Lake City
LEASE NUMBER U-01196
UNIT Ute Trail Unit
Uintah Co., Utah

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Uintah Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of May, 19 59

Agent's address P. O. Box 523 *Company* DeKalb Agricultural Assn., Inc.

Phone 1073 *Signed* M. C. Johnson *Agent's title* Geologist

SEC. AND ¼ OF ¼	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
NE NE 8	10S	22E	1	None	None		Testing	None	None	T.D. 8267 Testing

May 1-2, Rigging down rotary rig.
May 2-4, Rigging up work over rig.
May 6, Perforated 8078 to 8110' with 4 jet shots per foot. Washed with 1000 gallons mud acid (15%). Testing
May 8, Fraced the zone 8078-8110 with 24,150 gallons treated water and 29,000# sand. Average injections rate 11.9 bbls per minute. Pressures max. 4850#, min. 3800# PSI.
May 8-13 Testing well to clean up.
May 13, Perforated zones 8040-8050, 7920-40, 7885-7905, 7831½-7840, 7798-7817, 7720-7750, with 4 cone shots per foot. Acidized perforations with 500 gallons mud acid (15%)
May 14, Fraced all above perforated zones with 21,000 gal. treated water, 28,000# sand. Average injection rate 13.6 bbls per minute. Max pressure 5400# min. pressure 3800# PSI.
May 15-26 Testing and preparing to casing frac.
May 26, Acidized all perforated zones with 1000 gallons mud acid (15%)
May 27, Fraced down casing with 552 bbls treated water and 48,000# sand. Average injection rate 31.7 bbls per minute, Maximum pressure 4100#, minimum pressure 3400# PSI.
May 27-31 Killed well to run packer and testing.

NOTE.—There were No runs or sales of oil; No M cu. ft. of gas sold; No runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-329
(January 1950)

16—25766-7 U. S. GOVERNMENT PRINTING OFFICE

Budget Bureau No. 42-R356.4.
Approval expires 12-31-55.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE Salt Lake City
LEASE NUMBER
UNIT Ute Trail Unit
Uintah Co., Utah

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah *County* Uintah *Field* Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of June, *19* 59,

Agent's address P. O. Box 523
Vernal, Utah
Phone 1073

Company DeKalb Agricultural Assn., Inc.
Signed Paul Pugh
Agent's title Manager

SEC. AND ¼ OF ¼	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
NENE 8	10S	22E	1	None	None	None	None	None	None	Tracing & Testing zones # 1,2,3
NENE 17	10S	22E	2	None	None	None	None	None	None	Drilling in Shale at 6416'
NENE 27	9S	20E	4	None	None	None	None	None	None	Total Depth 6510' Running Electric logs Prep to run casing.

JUL 9 1959

NOTE.—There were No runs or sales of oil; None M cu. ft. of gas sold;
No runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-329
(January 1950)

16—25766-7 U. S. GOVERNMENT PRINTING OFFICE

June 5, 1959

DeKalb Agricultural Association, Inc.
P. O. Box 523
Vernal, Utah

Attention: Paul Pugh, Vice President

Re: Well No. Ute Trail Unit 1
NE NE Sec. 8, T. 10 S, R. 22E,
SLBM, Uintah County, Utah

Gentlemen:

Your attention is directed to Rule C-22, General Rules and Regulations and Rules of Practice and Procedure. Said rule provides for the submitting of a report of operations and well status report to the Oil and Gas Conservation Commission.

Your compliance with said rule is hereby requested.

We are enclosing some copies of Form OGCC-4, "Report of Operations and Well Status Report", for completion and return. For your convenience, Rule C-22 has been printed on the back of said form. Federal Form 9-329, Lessee's Monthly Report of Operations, may be used in lieu of Form OGCC-4.

Please note that if two legible copies, carbon or otherwise, of the report filed monthly with the United States Geological Survey on Form 9-329, are also filed each month with this Commission, it will be deemed compliance with Rule C-22, Paragraphs 1, 2, 3 and 4.

Yours very truly,
OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
Executive Secretary

CBF:cp

June 16, 1959

DeKalb Agricultural Association, Inc.
Box 523
Vernal, Utah

Attention: Paul Pugh, Vice President

Gentlemen:

Re: Well No. Ute Trail Unit 1
NE NE Sec. 8, T. 10 S, R.22 E,
SLBM, Uintah County, Utah

Your attention is directed to Rule C-22, General Rules and Regulations and Rules of Practice and Procedure. Said rule provides for the submitting of a report of operations and well status report to the Oil and Gas Conservation Commission.

Your compliance with said rule is hereby requested.

We are enclosing some copies of Form OGCC-4, "Report of Operations and Well Status Report", for completion and return. For your convenience, Rule C-22 has been printed on the back of said form. Federal Form 9-329, Lessee's Monthly Report of Operations, may be used in lieu of Form OGCC-4.

Please note that if two legible copies, carbon or otherwise, of the report filed monthly with the United States Geological Survey on Form 9-329, are also filed each month with this Commission, it will be deemed compliance with Rule C-22, Paragraphs 1, 2, 3 and 4.

Yours very truly,
OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
Executive Secretary

CBF:cp

DEKALB

Agricultural Association, Inc.
COMMERCIAL PRODUCERS AND DISTRIBUTORS OF AGRICULTURAL PRODUCTS

U. S. Oil Division
P. O. BOX 523
VERNAL, UTAH
TELEPHONE 1073

June 17, 1959

The State of Utah
Oil and Gas Conservation Commission
310 Newhouse Building
Salt Lake City 11, Utah

ATTENTION: Mr. Cleon B. Feight

RE: Ute Trail Unit Wells
No. 1, 2 and 4
Uintah County, Utah

Gentlemen:

Enclosed herewith please find approved copies of Federal Form 9-329, Lessee's Monthly Report of Operations as filed with the United States Geological Survey on the above mentioned wells.

These are forwarded to you in accordance with you letter of June 5, 1959.

Yours very truly,

DEKALB AGRICULTURAL ASSN., INC.
U. S. Oil Division

M. C. Johnson

M. C. Johnson
Geologist

MCJ/cc
Encl.

Budget Bureau No. 42-R356.5.
Approval expires 12-31-60.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE Salt Lake City
LEASE NUMBER
UNIT UTE TRAIL UNIT
Uintah County, Utah

LESSEE'S MONTHLY REPORT OF OPERATIONS

7/H

8-11-59

State Utah County Uintah Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of July, 1959,

Agent's address Box 523
Vernal, Utah

Company DESERET AGRICULTURAL ASSN., INC.

Signed [signature]

Agent's title Vice-President & Manager

Phone 1073

SEC. AND ¼ OF ¼	TWP.	RANGE	WELL NO.	DAYS PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
NENE 8	10S	22E	1	-0-	-0-	-0-	-0-	-0-	-0-	Shut in for pressure build up. Last test est. 1 million Cu. Ft. Gas per day.
NENE 17	10S	22E	2	-0-	-0-	-0-	-0-	-0-	-0-	Temporarily Abandoned
NENE 16	10S	22E	3	-0-	-0-	-0-	-0-	-0-	-0-	Drilling in Shale at 2007'
NENE 27	9S	20E	4	-0-	-0-	-0-	-0-	-0-	-0-	Flowing and Testing after Frac. Est. of 200,000 Cu. Ft. Gas per day
NENE 23	9S	20E	5	-0-	-0-	-0-	-0-	-0-	-0-	Drilling in Hard Rocky Lime at 3352'

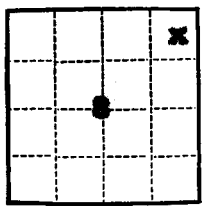
NOTE.—There were No runs or sales of oil; None M cu. ft. of gas sold; None runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-329
(January 1950)

16—25766-8 U. S. GOVERNMENT PRINTING OFFICE

Form 9-331a
(Feb. 1951)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office Salt Lake City
Lease No. U-01196
Unit Ute Trail Unit
DeKalb, et al

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	X
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		Perforations	X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July, 1959

Well No. 1 is located 660 ft. from {N / S} line and 660 ft. from {E / W} line of sec. 8

NE NE, Sec. 8 (¼ Sec. and Sec. No.) T-10-S, R-22-E (Twp. / Range) SLM (Meridian)

Wildcat (Field) Uintah (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is 5010 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Perforated the following zones: with 2 bullets and 2 Jet shots per foot 7320 - 7340', 7004 - 7036', and 7062 - 7082', 6720 - 6730' and 6747 - 6770', 5242 - 5262' will frac each zone: with 1000 gallon, and 1 lb. per gallon.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company DeKalb Agricultural Association, Inc.

Address P. O. Box 523

Vernal, Utah

By J. K. Kay

Title Production Superintendent

U. S. GOVERNMENT PRINTING OFFICE: 1958 O -463339

Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

			X
	●		

(*SUBMIT IN TRIPLICATE*)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Salt Lake City

Lease No. U-02396

Unit [illegible], et al # 1
UTE TRAIL UNIT

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	X
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 20, 1959

Well No. 1 is located 660 ft. from {N} line and 660 ft. from {E} line of sec. 6

NE/4 NE/4 Sec. 6, (¼ Sec. and Sec. No.) T-10-S, (Twp.) R-20-E (Range) S. L. M. (Meridian)

Wildcat (Field) Uintah (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is [illegible] ft. K. B.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Fraced the following zones:
6-22-59
7326 to 7340' with 250 gal. mud acid, 13,000 Gallons X-38, 10,400# Sand. Injection rate 12.3 bpm, Treating Pressure Max. 5300#, Min. 4850#.
6-25-59
7036 to 7062' with 7,900 Gal. Petrojel, 13,000# Sand, Injection rate 10.7 bpm. Treating Pressure Max. 6000#, Min. 4700#.
7-1-59
6718 to 6730', with 4,300 Gal. Petrojel, 4,500# Sand, 250 Gal. Mud Acid, Injection rate 9.2 bpm, Treating Pressure Max. 6000#, Min. 5050#.
7-15-59
Wasatch Zone 5912 to 5962' with 250 X-38 Mud acid, 400 balls J-79 and J-94 [illegible]
14,000# Sand, Inj. rate 12.3, Treating pressure Max. 4850#, min. 3700#. Well shut in.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company [illegible] AGRICULTURAL ASSN., INC.

Address Box 590
Vernal, Utah

By J. R. Ray

Title Production Supt.

GPO 862040

Budget Bureau No. 42-R355.5.
Approval expires 12-31-60.

Salt Lake City

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE Ute Trail Unit
LEASE NUMBER
UNIT

N/H
9-14

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah County Uintah Field Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of August, 19 59, Company DEKALB AGRICULTURAL ASSN., INC.

Agent's address Box 523 Vernal, Utah Signed J. R. Ray

Phone 1073 Agent's title Production Supt.

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
NENE 8	10S	22E	1	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NENE 17	10S	22E	2	-0-	-0-	-0-	-0-	-0-	-0-	Abandoned
NENE 16	10S	22E	3	-0-	-0-	-0-	-0-	-0-	-0-	Total Depth 5499' Ran 5-1/2" Casing set at 5498'. Perforated 4 Shots per Ft. 5195' to 5213', fraced w 240 bbls Diesel -1/2# Sand per Gal. Perforated 2 shots per Ft. 4832' to 4850'. Fraced with 620 bbls Diesel Oil, 23,000# Sand. Now testing, est. of 9 Millions Cu. Ft. Gas per Day.
NENE 27	9S	20E	4	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NENE 23	9S	20E	5	-0-	-0-	-0-	-0-	-0-	-0-	Running Casing Total Depth 6510' Ran Electric Logs.

No None

NOTE.—There were None runs or sales of oil; ____ M cu. ft. of gas sold; ____ runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-329
(January 1950)

16—25766-8 U. S. GOVERNMENT PRINTING OFFICE

DEKALB

Agricultural Association Inc.
COMMERCIAL PRODUCERS AND DISTRIBUTORS OF AGRICULTURAL PRODUCTS

U. S. Oil Division
P. O. BOX 523
VERNAL, UTAH
TELEPHONE 1073

October 23, 1959

State of Utah
310 Newhouse Building
Salt Lake City, Utah

Continental Oil Company
P. O. Box 126
Craig, Colorado

Petan Company
P. O. Box 390
Santa Barbara, California

Sun Oil Company
P. O. Box 903
Salt Lake City, Utah

RE: Ute Trail Unit

Gentlemen:

Enclosed please find for your files a Log of Oil or Gas wells on the # 1 and # 3 Ute Trail Unit, Uintah County, Utah.

Yours very truly,

DEKALB AGRICULTURAL ASSN., INC.
U. S. Oil Division

M. C. Johnson
Geologist

MCJ/dc
Encl.

DEKALB

Agricultural Association, Inc.
COMMERCIAL PRODUCERS AND DISTRIBUTORS OF AGRICULTURAL PRODUCTS

U. S. Oil Division
P. O. BOX 523
VERNAL, UTAH
TELEPHONE 1073

November 27, 1959

State of Utah
Oil & Gas Conservation Commission
310 Newhouse Building
Salt Lake City, Utah

RE: Ute Trail and
Uintah Units
Uintah Co., Utah

Gentlemen:

Under seperate cover we are sending you logs on the following wells for your files:

Ute Trail # 1, Electric, Induction-Electric, Micro and Sonic.

3, Gamma-Neutron, Induction Log.

4, Induction-Electric, Micro and Sonic.

5, Induction-Electric, Micro and Sonic.

8, Gamma-Neutron-Cement Log.

Uintah # 1, Induction-Electric, Micro and Sonic

Logs for Ute Trail # 6 and 7 wells have been forwarded to your office directly from the logging company.

Yours very truly,

DEKALB AGRICULTURAL ASSN., INC,
U. S. Oil Division

M. C. Johnson
Geologist

MCJ/dc
Encl.

DEKALB

Agricultural Association, Inc.
COMMERCIAL PRODUCERS AND DISTRIBUTORS OF AGRICULTURAL PRODUCTS

U. S. Oil Division
P. O. BOX 523
VERNAL, UTAH
TELEPHONE 1073

November 27, 1959

The State of Utah
Oil & Gas Commission
310 Newhouse Building
10 Exchange Place
Salt Lake City 11, Utah

Attention: Cleon B. Feight, Executive Secretary

Gentlemen:

Reference is made to your letters of October 30 and November 23, 1959 in which you requested logs on the Uintah and Ute Trail wells.

According to our copy of the Oil and Gas Commissions Rules and Regulations Rule C-5 (a) a copy of the electric logs is to be filed within ninety (90) days after the completion of any further operations on any well. The wells mentioned in your letter were not completed until either September 21 or 29, 1959.

If there is a change in the amount of time in filing of well log as specified under Rule C-5 (a) would you please advise us at your earliest convenience.

Yours very truly,

DEKALB AGRICULTURAL ASSN., INC.
U. S. Oil Division

M. C. Johnson

M. C. Johnson
Geologist

MCJ/dc

December 7, 1959

DeKalb Agricultural Association
U. S. Oil Division
P. O. Box 523
Vernal, Utah

Attention: Mr. M. C. Johnson,
Geologist

Gentlemen:

This is to acknowledge receipt of your letter of November 27, 1959.

Please be advised that the rule has not been changed with respect to the time in which logs must be filed.

It was our understanding that these wells were completed at an earlier date than indicated in your letter; therefore, as a matter of general office procedure, we sent out our form letter requesting the logs.

In the future, should we be in error again, just advise us of the correct date of completion.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT
EXECUTIVE SECRETARY

CBF:co

(10?)

Budget Bureau No. 42-R356.5.
Approval expires 12-31-60.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LAND OFFICE Salt Lake City
LEASE NUMBER
UNIT Ute Trail Unit

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Utah *County* Uintah *Field* Wildcat

The following is a correct report of operations and production (including drilling and producing wells) for the month of April, *19*60

Agent's address P. O. Box 523
Vernal, Utah

Company DEKALB AGRICULTURAL ASSN., INC.

Signed Paul Pugh

Phone 1073

Agent's title Manager

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
NENE 8	10S	22E	1	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NENE 17	10S	22E	2	-0-	-0-	-0-	-0-	-0-	-0-	Abandoned
NENE 16	10S	22E	3	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NENE 27	9S	20E	4	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NENE 23	9S	20E	5	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NENE 24	9S	20E	6	-0-	-0-	-0-	-0-	-0-	-C-	Shut In.
NENE 4	10S	22E	7	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.
NWNW 22	10S	22E	8	-0-	-0-	-0-	-0-	-0-	-0-	Shut In.

NOTE.—There were No runs or sales of oil; No M cu. ft. of gas sold; No runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-329
(January 1950)

16—25766-8 U. S. GOVERNMENT PRINTING OFFICE

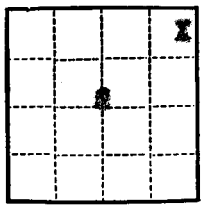
Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Land Office Salt Lake City, Utah

Lease No. U-01196

Unit Ute Trail Unit



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	X	SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			
Dually Complete	X		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

March 14, 19 61

Well No. 3 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 9

NE/4 NE/4 Sec. 9 (¼ Sec. and Sec. No.) T-10-S (Twp.) R-22-E (Range) S. L. M. (Meridian)

Bitter Creek (Field) Uintah (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is 5010 ft. K. B.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Proposed New Work Program:

1. a. Perforate Wasatch Zone 5055' to 5091'
   b. Frac Zone 5055' to 5091' and 5242' to 5263' down casing with treated water and sand, plus a plugging agent (Nylon Balls)
2. Drill out bridge plug at 5302'
3. Drill out bridge plug at 7480'
4. Drill out and clean up hole by use of gasified water.
5. Dually complete well from Wasatch and Mesa Verde Horizons, by setting permanent type packers at 5300 and 7600 feet.

Set side door choke at 7600 feet. Produce Mesa Verde gas through tubing and Wasatch Gas through annulus.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company DEKALB AGRICULTURAL ASSN., INC.

Address BOX 529

Vernal, Utah

By M. C. Johnson

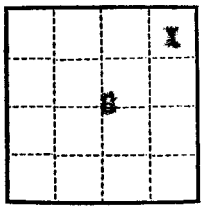
Title Geologist

GPO 862040

Form 9-331a
(Feb. 1951)

Budget Bureau 42-R358.3.
Approval expires 12-31-55.

Salt Lake City, Utah



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office U-01196-C
Lease No. Ute Trail
Unit

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	X
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

April 17, 1961

Well No. 1 is located 660 ft. from ~~[S]~~ [N] line and 660 ft. from ~~[W]~~ [E] line of sec. 8

NE/4 NE/4 Sec. 8 (¼ Sec. and Sec. No.) | T-10-S (Twp.) | R-22-E (Range) | S. L. M. (Meridian)

Bitter Creek (Field) | Uintah (County or Subdivision) | Utah (State or Territory)

The elevation of the ~~derrick floor~~ above sea level is 5010 ft. K. B.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

April 9, 1961 - Perforated 5060' to 5081' with 4 jet shots per foot.
April 10, 1961 - Broke Zone 5060 to 5081 down with 250 gal. mud acid at 3200-2700 PSI.
April 11, 1961 - Treated perforated zones 5060' to 5081' and 5242' to 5262' down casing with 37,200 Gals. treated water, 55,000 pounds 20/40 sand, 1,530# fluid loss additive, 80 ball sealers.
Max. Treating Pressure 2700psi at 40.1 bbls. per min.
Minimum Treating Pressure 2200 psi at 40.1 bbls. per min.
Immediate Shut in 2100 psi.
15 Minute Shut In 1700 psi.
Dropped 80 ball sealers after injecting 470 bbls. frac fluid.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company DENALD AGRICULTURAL ASSN., INC.

Address Box 523

Vernal, Utah

By [signature]

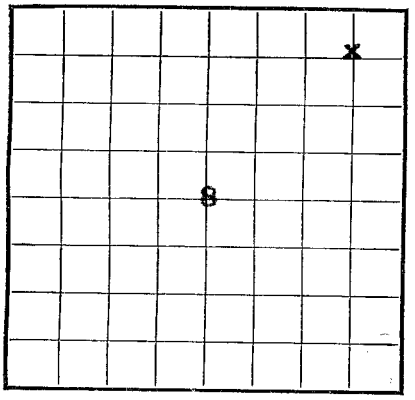
Title Geologist

U. S. GOVERNMENT PRINTING OFFICE 16—8437-8

Form 9-330

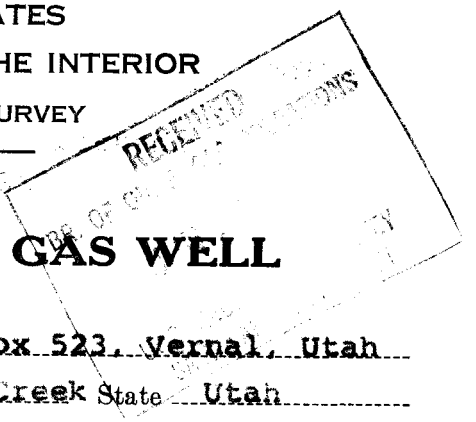
dget Bureau No. 42-R-355.3.
proval expires 12-31-55.

U. S. Land Office Salt Lake City
Serial Number U-01196
Lease or Permit to Prospect Ute Trail Unit



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOG OF OIL OR GAS WELL

Company DeKalb Agricultural Assn., Inc. Address P.O. Box 523, Vernal, Utah
Lessor or Tract Ute Trail Unit Field Bitter Creek State Utah
Well No. 1 Sec. 8 T. 10S R. 22E Meridian S.L.M. County Uintah
Location 660 ft. {N./S.} of N Line and 660 ft. {E./W.} of E Line of Section 8 Elevation 5009 DF
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed

Date June 13, 1961 Title

The summary on this page is for the condition of the well at above date.

Commenced drilling February 14, 19 59 Finished drilling April 16, 19 59

OIL OR GAS SANDS OR ZONES

(*Denote gas by G*)

No. 1, from 5055 to 5091 G No. 4, from 7315 to 7344 G
No. 2, from 5240 to 5272 G No. 5, from 7715 to 7945 G
No. 3, from 6718 to 6775 G No. 6, from 8040 to 8110 G
7000 7087 G

IMPORTANT WATER SANDS

No. 1, from 3257 to 3270 No. 3, from 3930 to 3985
No. 2, from 3370 to 3410 No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
13-3/8"	48#			270.21	Open				Surface
7"	23,26#			7965.44	Guide				Gas Production
							See opposite		
							page for Perfs.		
5"	17.93#		Ygnstn	633	Guide				Gas Production

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8"	284.21	225 sxs	Pump & Plug	Water	Hole Full
7"	7973.44	1730 sxs	Pump & Plug	9.6#	Hole Full
5"	7631-8264	75 sxs	Pump & Plug	13.5#	Hole Full

FOLD | MARK

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set
Adapters—Material Size

SHOOTING RECORD

FOLD

PLUGS AND ADAPTERS

Heaving plug—Material ---------- Length ---------- Depth set ----------

Adapters—Material ---------- Size ----------

SHOOTING RECORD

REFER TO BACK OF PAGE

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from Surface feet to 8269 feet, and from ---------- feet to ---------- feet

Cable tools were used from ---------- feet to ---------- feet, and from ---------- feet to ---------- feet

DATES

June 13, 1961 Put to producing Shut In May 21, 1961

The production for the first 24 hours was ---------- barrels of fluid of which ----% was oil; ----% emulsion; ----% water; and ----% sediment. Mesaverde 4,000 MCFD 3/8" Ck Gravity, Be. ----------

If gas well, cu. ft. per 24 hours Wasatch 3,000 MCFD 2" Gallons gasoline per 1,000 cu. ft. of gas ----------

Rock pressure, lbs. per sq. in. Wasatch 2400 psi, Mesaverde 5400 psi

EMPLOYEES

Ralph Murry Pusher, Driller Chas. Hamilton, Driller

Larry Caldwell, Driller George Piper, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION	TOPS
Surface	978'	978'	Uintah	Surface
978	4337'	3359'	Green River	978'
4337	6680'	2343'	Wasatch	4337'
6680	8269'	1589'	Mesaverde	6680'

[OVER]

16—43094-3

HISTORY OF OIL OR GAS WELL

16—43094-2 U. S. GOVERNMENT PRINTING OFFICE

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

PERFORATIONS:

5060-5081'	4 Jet shots per foot
5242-5262'	2 bullets & 2 Jet shots per foot.
6722-6730	2 bullets & 2 jet shots per foot
6747-6770	2 bullets & 2 Jet shots per foot.
7004-7036	2 bullets & 2 Jet shots per foot.
7062-7082	2 bullets & 2 Jet shots per foot.
7320-7340	2 bullets & 2 Jet shots per foot.
7720-7750	4 tubing Jet shots per foot
7798-7817	4 tubing jet shots per foot.
7831½-7840	4 tubing jet shots per foot.
7885-7905	4 tubing jet shots per foot.
7920-7940	4 tubing jet shots per foot.
8040-8050	4 tubing jet shots per foot.
8078-8110	4 tubing jet shots per foot.

PACKERS

1. Baker model "D" set at 7357' K.B.
2. Baker string packer set at 5269' K.B.
3. Sidedoor chokes are located above each packer

PRODUCTION:

Wasatch Zone:	3,000 MCFGD	through 2"
Mesaverde Zone:	6700-6800	700,000 CFD
	7004-7082	300,000 CFD
	7320-7340	700,000 CFD
	7720-8110	4,000 MCFD through 3/8" choke w/1000 psi back pressure.

OPERATOR: DeKalb Agricultural Association, Inc.

WELL: # 1 Ute Trail Unit

LEASE: U-01196

LOCATION: 660' FNL, 660' FEL Section 8, T-10-S, R-22-E, (S.L.M.)
Uintah County, Utah

ELEVATION: 4999' G. L. 5010' K.B.

COMMENCED: February 14, 1959 4:00 P.M.

SET SURFACE: February 17, 1959 1:45 A.M.

REACHED TOTAL DEPTH: April 16, 1959

COMPLETED: September 21, 1959

TOTAL DEPTH: 8267' Schlumberger 8270' Driller

LITHOLOGY: M. C.Johnson

CASING: Set 13-3/8", J-55, 48#, H-40 csg at 284.21' K.B. with 225 sacks plus 2% Ca Cl.
Set 7", (1023.02' of 26# N-80, 2594.25', of 23# N-80, 4356.13' of 23# J-55) csg at 7973.44' K.B. with 1730 sacks cement and poz-mix plus 4% gel.
Set 633' of 5", 17.93# N-80, Youngstown Hydrill Liner at 8264' with 75 sacks regular cement plus 28# of HR-4 Retarder. Top of liner at 7631'.

PRODUCTION: 2.5 MMCFPD Wasatch Zone
3.5 MMCFPD Mesaverde Zone

PERFORATIONS: 8078-8110', 8040-8050', 7920-7940', 7885-7905', 7831½'-7840', 7793-7817', 7720-7750', with 4 tubing jet shots per foot; 7320-7340', 7062-7082', 7004-7036', 6747-6770', 6722-6730', 5242-5262', perforated with 2 bullets and 2 jet shots per foot.'

CONTRACTOR: Miracle and Wooster Drilling Company

TYPE RIG: Unit - 15

HOLE SIZE: Drilled 12-1/4" pilot hole to 295', reamed out to 17-1/4". Drilled 8-3/4" in hole to 7976. Reduced hole to 6-1/8" from 7976 to 8269'.

FORMATION TOPS FROM ELECTRIC LOG:

Green River	978'	(+ 4032)
Wasatch	4338'	(-672)
Mesaverde Transition	6680'	(-1670)
Total Depth	8267'	

LOGS: Schlumberger:

Electric Log	284 to 8267'
Induction Electric	6877 to 8261'

(Mechanical difficulties occurred from 284 to 6877' producing an inferior Log)

Micro Log	283 to 8266'
Sonic Log	1050 to 6874' and 7972 to 8267'

(Due to mechanical difficulties unable to obtain Sonic Log from 6874 to 7972'.)

McCullough Gamma Ray Correlation & Collar Locator Log.
Continental Laboratories, Inc., Gas and Mud Analysis, and penetration rate log from 284' to 8269'.
Lithologic Log from 285 to 8269'.

DRILLING TIME: Two foot drilling time was maintained from 284 to 8269' by means of a mechanical recorder.

SAMPLE PROGRAM: Samples were caught at 10 foot intervals from surface to total depth and at 5 foot intervals through zone of interest.
Three sets of dry samples were caught as well as one cloth bag of wet samples.

CORES: No diamond or conventional cores were taken.
Schlumberger Wire Line side wall cores at 8150' to 8147', 8143', 8105', 8095', 8079', recovered only 8143', and 8087'.

DRILL STEM TESTS: MESAVERDE FORMATION

Hook wall test with packer set in 7" casing at 7911 feet.
Interval Tested: 7911 to 8115'. (Casing shoe at 7976')
Water Cushion: 1000 feet.

Initial Shut In: 30 Minutes
Open 10-1/2 Hours. Opened with strong blow increasing to very strong blow in 1 minute. Gas to surface in approximately 20 minutes at rate of 648,000 CFPD decreasing to 428,000 CFPD by end of test. Recovered 180 feet of water and distillate cut drilling mud.
Final Shut In: 135 minutes.
Initial shut In Pressure: Failed
Final Shut In pressure: 3500# and building (extrapolated) out to 5120#) Chart time expired.
Initial Flow Pressure: 1078#
Final Flow Pressure: 100#
Initial Hydrostatic: 5313#
Final Hydrostatic: Chart time expired.

below is a tabulation of 30 minutes open and 30 minutes shut in tests conducted during DST #1.

TIME	PRESSURE	MINUTES	END OF TEST	GAS FLOW RATE CU FT PER DAY	REMARKS
4:00 PM	575#	30	8:00 PM	No Test	Steady stream Mud W/flow of light to medium slugs.
5:00 PM	600	30	5:30 PM	648,000	" " " "
6:00 PM	625	30	6:30 PM	648,000	" " " "
7:00 PM	675	30	7:30 PM	648,000	" " " "
8:00 PM	625	30	8:30 PM	486,000	" " " "
9:00 PM	600	30	9:30 PM	1,020,000	Kick out large slug mud.
10:00 PM	600	30	10:30 PM	627,000	Steady fair flow at 60"
11:30 PM	950	60	12:00 AM	560,000	Flowed cons. Distillate mud
12:30 AM	450	30	1:00 AM	517,000	Small slug mud
1:30 AM	490	30	2:00 AM	428,000	Small mist of m
2:30 AM	500	30	3:00 AM	428,000	" " "
3:20 AM	300	20			ST 20" very sm. amount of mud.

MUD PROGRAM Used clear water from under surface casing to 4750 feet with a heavy concentration of lost circulation material below 1560 feet. After two to three days lost circulation material would "ware out" and another pill would have to be spotted to plug their zone at 1560 feet. Mudded up at 4750' using aquagel, barite chemicals and 8 to 10% diesel with a "pill" of lost circulation material add from time to time. Attempted to maintain a 9.4 to 9.8# mud while drilling to 7980 feet. After setting 7" intermediate casing, maintained mud weight 9.2# to 9.6# until gas blow out at 8104#. This necessitated at 13.5# weight and less than 10 cc water loss which was maintained to a total depth of 8169 feet.

OIL & GAS SHOWS: Several scattered residual oil shows were noted in the Uintah and Green River formations. At 2300 to 2340 a strong gas kick was recorded on the mud log. This zone correlates with a similar zone in the Seaborad # 1 Bitter Creek which recovered approximately one million Cu. Ft. per day on drill stem test from a fractured shale zone. In tne Wasatch formation moderate gas kicks were recorded from the following zones:

1. 5055 to 5090'
2. 5240 to 5270'
3. 6050 to 6070'

No cut with CCl_4 or fluorescence was noted in the samples Several well developed sands in the "Transitional" as Paleo-eocene gave good gas kick on the mud analyzer. A quantitative interpretation of the gas kick would be difficult due to a very high "background" kick. Drilling time indicated the sands contained low permeability, porosity and perhaps were of low pressure an under saturated. The zones are noted below.

1. 6540 to 6555'
2. 6720 to 6775'
3. 6915 to 6940'
4. 7000 to 7090'
5. 7325 to 7345'

Sands in the Mesaverde are shaly to clean, fine to medium grained, quartizitic and contain very low permeability and porosity. Good gas kicks were recorded through the zones of porosity with a gas blow-out at 8085 to 8110 feet. This zone indicated very high bottom hole pressures, fair porosity but low permeability.

COMPLETION PROCEEDURE:

ZONE 5242 to 5262' (Wasatch): Perforated with 2 bullets and 2 jet shots per foot. Washed perforations with 250 gallons mud acid.
Fraced down tubing with 16,800 gallons treated salt water and 14,000 pounds of 20/40 mesh sand treating pressures; Maximum 4200 PSI, Minimum 3700 PSI.
Average injection rate of treating fluid 12.3 bbls per min. Shut in for 12 hours. Flowed from 1.5 to 2.5 Million Cu. Ft. per day after clean up with a 3250 PSI on tubing.

ZONE 6720 to 30', 6747 to 6770': Re-attempted frac. Fraced down tubing with 11,550 gallon jelled salt water and 5250 pounds of 20/40 mesh sand. Formation break down 5350 PSI. Treating pressure maximum 4900 PSI, Minimum 4500 PSI. Average injection rate 11.4 bbls per min. Flowed and swabbed water with heads of gas. Flowed 300,000 to 750,000 Cu. Ft. day with spray of water.

ZONE 6720 to 6730, 6747 to 6770: Perforated with 2 bullets and two jet shots per foot. Washed perforations with 250 gallons mud acid. Washed acid back and forth across perforations.
Fraced down tubing with 4,300 gallons Petro jel, (jelled Oil) and 4,500 pounds of 20/40 mesh sand before treatment screened out. Treating pressure 6,000 psi maximum 5050 PSI minimum. Average injection rate 9.2 bbls per min. Well flowed sand back and cleaned tubing. Well flowing approximatel 1 million Cu. Ft. per day, with spray of water.

ZONE 7004 to 7082: Perforated with 2 bullets per foot and 2 jets per foot.
Washed perforations with 250 gallon mud acid.
Fraced down tubing with 13,000# of 20/40 mesh sand and 7,900 gallons petro jel. Maximum treating pressure 6,000# PSI, minimum 4700# PSI. Average injection rate 11.4 bbls per minute. Testing approximately 300,000 Cu. Ft. per day.

ZONE 7320 to 7340: Perforated with 2 bullets per foot. and 2 jet shots per foot. Washed perfs. with 250 gallons mud acid. Fraced down tubing with 10,100# of 20/40 mesh sand and 13,000 gallons treated water. Treating pressure maximum 5,300# PSI and minimum 4250# PSI. Average injection rate 12.8 bbls per minute. Shut in tested less than a million Cu. Ft. per day.

COMPLETION PROCEEDURE (CON'T)

ZONES 7720 to 8110: Re-Frac attempt. Washed perforations with 1000 gallons mud acid. (May 25, 1959) Started frac treatment - Frac Head bursted shut down let hole unload while waiting for new head.
Fraced with a total of 48,000# of 20/40 mesh sand and 530 bbls treated water. Able to get 300 bbls fluid and 20,000# sand into formation before screened out. Treating pressure maximum 4100# PSI, minimum 3,400 PSI, with an Average injection rate of 31.7 bbls per minute. After screen out allowed well to blow for four hours then attempted to pump into formation again, averaged 2 to 5 bbls per minute at 3500# PSI so shut down.

ZONES 8040 to 8050', 7920 to 7940', 7885 to 7905', 7831½ to 7840, 7798 to 7917', 7720 to 7750',: Perforated with 4 Mac tubing jet shots per foot (3/8" hole).
Acidized perforations with 500 gallons 15% mud acid. Opened well and flowed back acid and water. Pumped 5 bbls diesel oil ahead of frac 12 bbls diesel oil followed by 500 gallon mud acid and then 40 bbls M-38 treated water to spot plug. Got 500# increase in pressure. Fraced with 21,000 gals. jelled water and 28,000# 20/40 mesh sand. Treating pressure 3,800# PSI minimum, 54,000# maximum. Average injection rate 13.6 bbls per min. Used 108 balls. Shut in for 12 hours.
Tested all zones 7720 to 8110', flowing at 3 to 3½ million Cu. Ft. per day.

ZONES 8078 8110': Perforated with 4 Mac tubing jet shots per foot (3/8" hole). Washed with 1,000 gasl 15% mud acid and let stand for 3 hours. Well flowed acid and water back with good amount of gas in 90 minutes. Flowed 650,000 to 400,000 Cu. Ft. per day.
Fraced zone with 5 5 bbls treated water, 29,300 pounds of 20/40 mesh sand. Formation broke at 3,800# PSI. Inserted 115 balls with pressure increase to 4850# and dropping back to 2750#. Average injection rate 11.9 bbls per minute. Shut in for 12 hours. Flowed at a rate of 2.25 to 5 million per day.

BIT RECORD

NO.	SIZE	MAKE	TYPE	DEPTH FROM	DEPTH TO	FEET	HOURS
1	9"	SEC	V-4	282	705	423	9-3/4
2	8-3/4"	HTC	OSC-1G	705	1180	475	14-1/4
3	8-3/4"	HTC	OSC-1G	1180	1250	70	6
4	8-3/4"	HTC	OWV	1250	1314	64	3
5	8-3/4"	HTC	OWV	1314	1356	42	3-1/2
6	8-3/4"	REED	YS-1	1356	1499	143	9
7	8-3/4"	REED	YS-1	1499	1741	242	10
8	8-3/4"	HTC	OWV	1741	1881	240	9-1/2
9	8-3/4"	HTC	OWV	1981	2146	165	5-3/4
10	8-3/4"	REED	YS-1	2146	2299	153	4
11	8-3/4"	HTC	OWC	2299	2610	311	11-3/4
12	8-3/4"	HTC	OWV	2610	2919	309	15-1/2
13	8-3/4"	HTC	OWV	2919	3170	250	12-1/4
14	8-3/4"	HTC	OWV	3170	3384	214	10-1/4
15	8-3/4"	HTC	OWV	3384	3495	111	6-1/4
16	8-3/4"	HTC	OWV	3495	3848	353	13-3/4
17	8-3/4"	HTC	OWV	3848	4186	338	14
18	8-3/4"	HTC	OWV	4186	4362	176	8-1/4
19	8-3/4"	HTC	OSC-1G	4362	4547	185	10
20	8-3/4"	HTC	OWV	4547	4696	149	7
21	8-3/4"	REED	YT	4696	4898	202	13-3/4
22	8-3/4"	HTC	OWV	4898	5027	129	17-1/4
23	8-3/4"	REED	YT	5027	5107	80	8-1/2
24	8-3/4"	REED	YT-1	5107	5227	120	10-1/4
25	8-3/4"	HTC	OWV	5227	5312	85	8
26	8-3/4"	REED	YT-1	5312	5430	118	10-3/4
27	8-3/4"	REED	YT-1	5430	5556	126	11
28	8-3/4"	HTC	OSC-1G	5556	5618	62	5-3/4
29	8-3/4"	HTC	OWV	5618	5705	87	7-3/4
30	8-3/4"	REED	YT-1	5705	5818	113	11
31	8-3/4"	REED	YT-1	5818	5932	114	11-1/2
32	8-3/4"	REED	YTq	5932	5985	53	7-1/2
33	8-3/4"	HTC	OWV	5985	6049	64	8-1/2
34	8-3/4"	HTC	OWV	6049	6107	58	7
35	8-3/4"	HTC	OW	6107	6185	78	12
36	8-3/4"	REED	YS-1	6185	6247	62	10-3/4
37	8-3/4"	REED	YT-1	6247	6317	70	10
38	8-3/4"	HTC	OWV	6317	6381	64	10
39	8-3/4"	HTC	OSC-1G	6381	6425	44	8
40	8-3/4"	REED	YS	6425	6500	75	11-1/4
41	8-3/4"	REED	YT	6500	6589	89	11
42	8-3/4"	REED	YS-1	6589	6669	80	11

BIT RECORD CON"t

NO.	SIZE	MAKE	TYPE	FROM	TO	FEET	HOURS
43	8-3/4"	REED	YT	6669	6709	40	6-3/4
44	8-3/4"	HTC	OWV	6709	6778	69	11-1/2
45	8-3/4"	HTC	OWV	6778	6878	100	11-1/2
46	8-3/4"	HTC	OWV	6878	6966	88	11-1/2
47	8-3/4"	SEC	M4N	6966	7057	91	12-3/4
48	8-3/4"	REED	YS-1	7057	7147	90	11
49	8-3/4"	REED	YS-1	7147	7224	77	10-1/2
50	8-3/4"	SEC	M4N	7224	7321	97	11-3/4
51	8-3/4"	HTC	OWV	7321	7399	78	10-3/4
52	8-3/4"	REED	YS-1J	7399	7555	156	18-3/4
53	8-3/4"	REED	YS-1J	7555	7681	126	13-3/4
54	8-3/4"	REED	YS-1J	7681	7795	114	12-1/4
55	8-3/4"	HTC	OWV	7795	7886	91	11
56	8-3/4"	SEC	M4N	7886	7984	98	10
57	8-3/4"	HTC	OWV	Re Run			
58	6-1/8"	SEC	H-7	7980	7999	19	8
59	6-1/8"	HTC	OWS	7999	8024	25	5
60	6-1/8"	SEC	H-7	8024	8030	6	6-1/4
61	6-1/8"	HTC	OWS	8030	8075	45	10-1/2
62	6-1/8"	HTC	OWS	8075	8115	40	8
63	6-1/8"	HTC	OWS	8115	8151	36	11-1/2
64	6-1/8"	HTC	OWS	8151	8165	14	7-1/2
65	6-1/8"	SEC	H-7	8165	8175	10	5
66	6-1/8"	HTC	OWS	8175	8186	16	6-3/4
67	6-1/8"	SEC	M-5	8186	8202	16	7
68	6-1/8"	SEC	M-5	8202	8228	26	9-1/2
69	6-1/8"	SEC	M-5	8228	8250	22	7
70	6-1/8"	HTC	OWS	8250	8269	19	10-1/2

SLOPE TESTS:

325' - 3/4°
580' - 1/2°
835' - 3/4°
1000' - 3/4°
1400' - 3/4°
1500' - 1-3/4°
1650' - 2-1/4°
1680' - 2-1/2°
1740' - 2°
1800' - 2°
1860' - 2°
1920' - 2°
1980' - 1-3/4°
2100' - 1-3/4°
2220' - 3°
2280' - 3°
2370' - 2-1/2°
2450' - 2°
2700' - 2-1/4°
2820' - 2-1/2°
2918' - 2-1/2°
3170' - 1-1/2°
3385' - 1-1/4°
3565' - 1-1/4°
3840' - 1-1/2°
4360' - 1-3/4°
4690' - 1-1/2°
5020' - 1-3/4°
5430' - 1-1/4°
5554' - 1-3/4°
5702' - 1-1/4°
5932' - 1-1/4°
6049' - 1°
6185' - 3/4°
6381' - 1-1/2°
6425' - 1-1/4°
6500' - 1-1/2°
6669' - 1-1/2°
6778' - 1°
7147' - 3°
7222' - 1°
7555' - 1°
7681' - 1-3/4°
7886' - 1-1/2°

DEKALB NO. 1 UTE TRAIL

300-10	Surface pipe-cement with trace siltstone, rusty to red-purple, firm, trace siltstone sandstone, light gray, slightly salt and pepper, very fine grained to fine grained, calcareous, argillaceous, trace light yellow-orange, very waxy oil stain, trace shale light gray to green, sub-waxy, firm.
310-20	Same as above.
320-30	Siltstone, red-purple, rusty-red, green, light gray-green, light gray, calcareous, slightly micaceous, with rust red, red-purple shaly inclusions.
330-40	Siltstone as above becoming predominately light gray, sandy, very calcareous, micaceous.
340-50	Siltstone, light gray, with trace red-purple, gray-green argillaceous, very calcareous, micaceous, trace sandstone, light gray, fine grained calcareous, slightly argillaceous, with very scattered weak trace orange, yellow-orange, very waxy, oil stain.
350-60	Siltstone as above with weak trace sandstone very weak trace oil stain.
360-70	Siltstone as above with light gray to buff siltstone, taking on a cement appear, argillaceous, bentonite, calcareous, fair trace light green, waxy shale.
370-80	Siltstone as above with fair trace light green, waxy shale, trace rusty-purple silty shale.
380-90	Siltstone as above becoming gray-green, with fair trace gray-green, waxy shale, trace red-purple.
390-400	Siltstone as above becoming gray-green, with fair trace gray-green, waxy shale, trace red-purple.
400-10	Siltstone as above with considerable, gray-green, trace red-purple siltstone.
410-20	Siltstone as above.
420-30	Sandstone, white very light gray, slightly salt and pepper, fine to medium grained, angular to sub-angular, clear frosted quartz grains, with trace pink, light orange grains, calcareous slightly argillaceous, trace shale, good trace cement.
430-40	Sandstone as above with occasional piece emitting yellow flourescence, slightly cut with CCl_4.
440-50	Sandstone, white, very light gray, slightly salt and pepper, fine to medium grained, few coarse grains, angular to sub-angular, poorly sorted, clear frosted, quartz grains, light gray chert, biotite mica, trace very light green, shale, calcareous matrix, very poor porosity, fair trace light orange-yellow, waxy oil, good yellow, yellow-brown, flourescence, good cut with CCl_4, no gas kick, trace very light green, shale, considerable cement, contamination.

DEKALB NO. 1 UTE TRAIL

450-60	Sandstone as above with less ornage, orange-yellow waxy oil, increase in brite green, waxy shale, trace, rusty-red, silty shale.
460-70	Silt and sandstone as above very limy den tite, slightly show oil, trace very light gray, argillaceous limestone, considerable cement.
470-80	Shale light gray, very light gray-green, firm, sub-fissle, slightly silic and calcareous, trace sandstone as above very weak trace orange-yellow waxy oil on sandstone, trace rusty-red, silty shale trace light to brite green, sub-waxy shale.
480-90	Shale, light gray, very light green-gray, silty, firm, slightly calcareous, trace light green, shale, scattered trace light gray to yellow gray siltstone trace cement.
490-500	Shale, as above with sandstone, light gray salt and pepper, fine to medium grained, angular to sub-angular clear frosted, quartz grains, trace light gray chert grains, fair to biotite mica, trace black and green assory, meneral, poorly sorted, calcareous matrix, very poor porosity and perm, fair trace orange, yellow-orange, waxy, plastic oil, golden-yellow flourescence, good cut with CCl_4, no gas reading trace cement.
500-10	Siltstone, shale, very light gray, very light gray-green, firm, subefissle, slightly micaceous, trace sandstone as above trace cement.
510-20	Siltstone and shale as above slightly calcareous, with trace limestone, very light gray-white, micro-crystalline, argillaceous.
520-30	Siltstone, sandstone, light gray, very fine grained, clear frosted quartz grains, trace biotite, mica, very calcareous friable very poor porosity, slightly argillaceous, no show trace very light gray-green, silty shale, fair trace pyrite.
530-40	Siltstone, sandstone as above trace brown-black lignitic streaks, trace pyrite, weak trace ornage-yellow, waxy oil globules trace green, light gray-green, sub-waxy silty shale.
540-50	Dolomite, dolomitic limestone, tan, light gray tan, cream-tan, crypto crystalline, brittle, argillaceous den tite good yellow mineral flourescence trace silt and sandstone as above.
550-60	Siltstone, sandstone, very light gray, slightly salt and pepper, very fine to fine grained, angular to sub-rounded clear frosted, light pink, rose, very light amber, quartz grains, weak trace light gray chert, trace mica, trace pyrite, calcareous, poorly sorted, friable to firm, very poor porosity, trace dolomite as above with silty and sandy streaks.
560-70	Siltstone and sandstone as above becoming more dolomitic.

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DEKALB NO. 1 UTE TRAIL

570-80	Siltstone, sandstone, very light gray, slightly salt and pepper, very fine to fine grained, firm to friable fair sorting, calcareous trace pyrite, micaceous, with occasional piece with orange-yellow to orange-brown, oil globules clinging to sample, trace shale, light gray, light gray-green.
580-90	Siltstone and sandstone as above with trace dolomite, dolomitic limestone, tan, red-tan, buff-tan, cream-tan, crypto crystalline slightly argillaceous den tite, brittle.
590-600	Interbedded siltstone, sandstone and shale, light gray, light gray-green, with very fine to fine grained, calcareous, sandstone, slightly argillaceous, very weak and occasional globule of orange oil.
600-10	Same as above.
610-20	Shale siltstone, sandstone, very light gray, very light green-gray, very fine grained, to medium grained, calcareous, argillaceous, micaceous, with scattered pieces with ferrug stain, few very scattered pieces with very poor porosity, with yellow-orange flecks of waxy oil good yellow flourescence, fair cut with CCl_4, trace black carbonaceous residue, fair trace dolomite, cream-tan to light brown, crypto crystalline slightly silty, den tite with dull golden-brown mineral flourescence.
620-30	Interbedded dolomite and silt and sandstone as above.
630-40	Shale siltstone, light gray, very light green-gray, slightly salt and pepper, argillaceous, calcareous, with trace pyrite micaceous, weak trace sandstone, light gray, very fine grained, argillaceous calcareous.
640-50	Shale and siltstone as above.
650-60	Sandstone, light gray, salt and pepper, fine to medium grained, angular to sub-rounded, clear frosted, occasional pink, light amber, quartz grain, trace light gray chert, trace mica, and black and green accessory mineral, poor to fair sorting friable calcareous, very slightly argillaceous with fair scattered trace black, brown, black carbonaceous inclusions, gilsonite poor porosity, with 20% pieces with yellow-orange, orange, orange-brown, thick waxy oil globules, golden yellow-flourescence, fair cut with CCl_4, trace light green, shale inclusions.
660-70	Siltstone, light gray, salt and pepper argillaceous micaceous calcareous, with trace sandstone as above, trace shale buff, light gray, light green, firm calcareous bentonite.
670-80	Siltstone and shale as above with trace sandstone very light gray, very fine to fine grained, angular to sub-angular, fairly well sorted, calcareous, micaceous, pyritic, argillaceous with scattered very poor porosity with weak trace brown-orange, yellow-orange, thick waxy oil.

DEKALB NO. 1 UTE TRAIL

680-90	Siltstone and shale as above with weak trace sandstone fair trace dolomite, dolomitic limestone, light brown, tan, micro to crypto crystalline den tite argillaceous silty, with scattered carbonaceous streaks.
690-700	Shale siltstone, sandstone, very light gray, salt and pepper, very fine to medium grained, angular to sub-rounded, clear frosted, with occasional light orange and rose quartz grain, trace gray to black chert, poorly sorted, calcareous, argillaceous very poor trace porosity firm to friable occasional piece with yellow-orange thick oil globules, trace light green shale inclusions.
700-10	Sandstone, light gray, very light rusty orange, light green salt and pepper, very fine to medium grained, angular to sub-angular, clear frosted light orange, pink, light amber quartz grains trace light gray to black chert grains, trace mica, black and green assory mineral trace pyrite, clacareous, firm tite with very poor trace porosity slightly argillaceous trace black to brown carbonaceous inclusiona weak show light orange to yellow-orange oil on scattered pieces 5% good gell flourescence good slow cut with CCl_4.
710-20	Shale, very light gray, buff, very firm, blocky meta bentonite kaolinitic calcareous, with scattered silty and sandy inclusions trace pyrite, mica.
720-30	Sandstone, light gray, slightly salt and pepper, very fine to fine grained with scattering, streaks of clear frosted, smokey, light amber quartz grains, trace light to black chert grains, trace mica, calcareous, argillaceous kaolinitic with very firm to friable streaks, very poor porosity, with widely scattered occasional pieces 5% emitting yellow flourescence, fair cut with CCl_4.
730-40	Sandstone as above with 5% of sample containing pieces with globules of brown oil.
740-50	Sandstone as above with considerable, tan to light brown, streaks and inclusions of carbonaceous shale and sandstone, trace yellow mineral flourescence.
750-60	Sandstone, very light gray salt and pepper very fine to fine grained with occasional medium grained streak calcareous, kaolinitic, with scattered poor porosity, approximately 15 to 20% pieces contain brown heavy residual oil globules, no flourescence until application of CCl4, good dull yellow cut with CCl_4.
760-70	Shale, very light gray, buff, blocky, firm, calcareous kaolinitic, with dolomite, dolomitic limstone, light brown to tan, crypto to micro crystalline, den firm, tite with golden brown fluorescence, no show, no cut with CCl_4.

DEKALB NO. 1 UTE TRAIL

770-80	Siltstone, very light gray, slightly salt and pepper, micaceous kaolinitic calcareous with shale very light gray, firm, kaolinitic calcareous.
780-90	Siltstone and shale as above with brown carbonaceous flecks, trace sandy streaks.
790-800	Siltstone, sandstone very light gray, white very fine grained, well sorted, calcareous, kaolinitic, firm, tite, with trace dolomitic limestone, tan, light brown, crypto to micro crystalline, silty, den tite golden brown fluorescence, occasionaly piece cut with CCl_4, trace kaolinitic, light gray shale.
800-10	Siltstone, sandstone as above with trace dolomitic limestone, trace pyrite.
810-20	Siltstone, sandstone as above with trace tan, dolomitic limestone, scattered few pieces cut with CCl_4.
820-30	Siltstone, sandstone, very light tan, salt and pepper, very fine to fine grained with occasional medium grain streak, angular to sub-rounded, clear frosted cloudy quartz grains, white, light gray chert occasional black accessory mineral trace mica very calcareous, kaolinitic trace brown carbonaceous flecks, den firm tite, very scattered occasional piece with cut, with CCl_4, scattered golden brown mineral fluorescence.
830-40	Siltstone and sandstone as above with increase in light tan, light brown, dolomite to limy, siltstone, fair trace dolomitic limestone, light tan, den tite silty.
840-50	Dolomite, tan cream tan, light brown, crypto to micro crystalline, argillaceous den tite with silty and sandy inclusions golden brown mineral fluorescence with silty and sandstone as above.
850-60	Siltstone, sandstone, very light gray, light green-gray, salt and pepper, very fine to fine grained kaolinitic, firm, tite slightly micaceous, with very weak trace brown residue oil.
860-70	Siltstone and sandstone as above with trace light brown, very fine grained sandstone, firm tite with black and brown carbonaceous flecks trace pyrite, trace very poor porosity, with dark brown residual thick oil globules, fair cut with CCl_4, very poor natural fluorescence 40-50% sample stained and has gilsonitic flecks.
870-80	Silt and sandstone as above with trace dolomite, dolomitic limestone, light brown, tan, cream-tan, den, with silty streaks, less show.
880-90	Siltstone and sandstone as above with interbedded light tan to brown dolomite, scattered poor show.
890-900	Siltstone and sandstone as above with scattered tarry brown oil specks, 20% pieces cut with CCl_4.

DEKALB NO. 1 UTE TRAIL

900-10 Siltstone, sandstone, light gray, trace tan, slightly salt and pepper, very fine grained to fine grained, with occasional streak medium grained angular to sub-rounded, clear frosted, light amber weak trace rose trace light gray, black chert grains, trace mica, black and green accessory mineral fairly well sorted calcareous, fairly clean, with trace poor porosity, scattered trace black tarry oil, trace gilsonite? Trace light green shale inclusions.

920-30 Sandstone and siltstone as above.

930-40 Siltstone, sandstone, light gray, light green-gray trace white, very scattered trace brown stain, very fine to fine grained, angular to sub-angular, trace rounded, clear frosted, with occasional pink and amber grain, trace light gray chert, trace mica, pyrite, fair sorting, calcareous, with shaly inclusions, trace lignitic, gilsonitic streaks, very poor porosity, with scattered light brown to brown oil stain, slightly cut with CCl_4, trace shale, light gray, gray-green, firm, blocky.

940-50 Siltstone and sandstone as above with fair trace unconsolidated medium quartz grains, trace pink to light puple, light purple-red, dolomite, and shaly dolomitic, trace brite green silty shale.

950-60 Shale, siltstone and sandstone as above.

960-70 Shale, brown, dark-brown, black, firm, blocky, dolomite, slightly micaceous, with trace sandstone as above, no fluorescence, scattered weak cut with CCl_4.

970-80 Shale, brown, tan, light gray, gray, blocky, firm, dolomite trace dolomite, tan to brown, crypto crystalline, slightly argillaceous, scattered yellow-brown fluorescence, no cut with CCL_4

980-90 Sandstone, white, very light gray, tan, fine to medium grained, angular to sub-angular, clear frosted, weak trace pink, light amber, quartz grains, trace light gray chert, trace black and green accessory mineral, trace mica, fair sorting calcareous, slightly kaolinitic, very poor porosity with fair trace black to dark brown, residual oil stain, weak cut with CCl_4, scattered fluorescence, trace shale gray, brown, gray-green, firm blocky.

990-1000 Dolomite, tan to brown, crypto crystalline, very shaly den, tite, with trace shale and sandstone as above.

1000010 Shale, light green, light gray-green, firm, blocky bentonite trace mica with interbedded siltstone, light gray, light gray-green white, trace mica, slightly calcareous.

1010-20 Shale and siltstone as above with trace sandstone very light gray, very fine grained, calcareous, micaceous, trace pyrite.

1020-30 Interbedded shale, siltstone and sandstone as above very scattered trace yellow fluorescence, no cut with CCl_4.

1030-40 Interbedded shale, siltstone and sandstone as predominately shale trace light green to very light purple-red shale.

1040-50 Interbedded shale, siltstone and sandstone with good trace unconsolidated quartz grains.

DEKALB NO. 1 UTE TRAIL

1050-60	Siltstone, sandstone as above with fair trace shale dolomite, tan, crypto crystalline den tite scattered brown residual oil stain, scattered yellow-tan fluorescence, cut with CCl_4.
1060-70	Silt and sandstone as above samples to fine its difficult to note cementing grain size, etc.
1070-80	Interbedded, shale siltstone, and shale as above.
1080-90	Same as above.
1090-1100	Same as above, with trace dolomite, dolomitic limestone, cream tan, tan,, crypto to micro-crystalline, slightly argillaceous den tite.
1100-10	Sandstone, light gray-tan, tan, very fine to fine grained, scattered medium grained, angular, sub-angular, clear frosted occasional rose, amber quartz grain, trace light gray chert, trace mica, calcareous, matrix, very poor porosity, scattered tan to brown oil stain, yellow fluorescence, slightly cut with CCl_4, trace shale light gray, light gray green, gray firm,.
1110-20	Sandstone, very light gray, salt and pepper, very fine to medium grained, angular to sub-rounded, clear, frosted, quartz grains, fair trace light gray chert, trace green to black accessory mineral, trace mica, feldspar? slightly calcareous slightly kaolinitic, friable, with very poor porosity, trace tan to brown oil stain, scattered yellow fluorescence slow cut with CCl_4, trace light green-gray shale.
1120-30	Sandstone as above (unconsolidated, sand catching samples in buckets due to lost circulation material in mud stream).
1130-40	Sandstone as above with very scattered trace oil stain,
1140-50	Sandstone as above.
1150-60	Sandstone as above.
1160-70	Sandstone, sand as above unconsolidated, bentonite matrix washing out?
1170-80	Sandstone sand as above with trace shaly inclusions trace brown to black carbonaceous material.
1180-90	Sandstone and sand as above with good trace dolomite shale, brown, tan, crypto crystalline, den hard tite, scattered yellow mineral fluorescence no cut with CCl_4.
1190-1200	Dolomite shale, tan, brown, crypto crystalline, trace mica, trace carbonaceous dark brown shale inclusions, trace sand as above.
1200-10	Dolomite, shale light tan, light brown, crypto crystalline crypto succrosic, massive den, tite with scattered trace brown oil stain, scattered yellow fluorescence slightly cut with CCl_4.
1210-20	Dolomite shale, dark brown, brown, tan, crypto crystalline, slightly argillaceous massive den tite, trace light gray-green, bentonite, firm, shale sand cavings as above.
1220-30	Dolomite shale, with trace siltstone and shale as above very poor sample.
1230-40	Dolomite shale, as above scattered light brown oil stain, scattered yellow fluorescence.

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1240-50	Dolomite shale, as above with scattered yellow brown, brown fluorescence, good cut with CCl_4, trace light green, gray-green, shale carbon-tet leaches oil out of shale leaving brown, oily, waxy appearances.
1250-60	Siltstone, light gray, trace micro-brown flecks, dolomite, firm, den, tite scattered yellow fluorescence scattered cut with CCl4, with trace dark-brown, oil shale as above.
1260-70	Siltstone as above with very good yellow fluorescence after application of CCl_4, good cut, carbon tet leaves light gray sample dark brown, brown after leaching out oil, trace green shale.
1270-80	Shale siltstone, light gray, very light gray-tan, light tan, slightly micro-micaceous, calcareous, den tite, good fluorescence after application of CCl_4, good cut, very good leached brown oil stain.
1280-90	Shale, siltstone, as above, oil shale good cut, very good leached brown oil stain, good trace pyrite.
1290-1300	Shale and very fine siltstone as above, oil shale good leached brown oil stain fair to pryite.
1300-10	Shale very light to dark brown, tan, firm, blocky dolomite, turns, waxy to oily brown when exposed to CCl_4, good green-yellow fluorescence, good cut with CCl_4.
1310-20	Shale, as above with good cut with CCl_4.
1320-30	Dolomite shale, brown to tan, den, brittle, tite, very good cut with CCl_4, trace micro-succrosic, argillaceous, dolomite, trace very good porosity, very poor perm. excellant cut, and residual brown oil stain.
1330-40	Dolomite shale as above.
1340-50	Dolomite shale as above with trace vein filling calcity, trace black tarry oil along fractures, very good cut with CCl_4.
1350-60	Dolomite shale as above covered with black to dark brown, tarry oil, good trace vein filling calcite trace pyrite.
1360-70	Dolomite shale as above with less free tarry oil no fluorescence until CCl_4 applied to sample.
1370-80	Shale and dolomite as above.
1380-90	Shale, light to dark brown, tan, very dolomitic, den brittle blocky, sub-waxy lustre, trace brown to black tarry oil along fractures, dull tan to brown natural fluorescence, good brassy yellow fluorescence, after application of CCl_4, very good cut with CCl_4, trace calcite, trace pyrite.
1390-1400	Shale as above with vein filling calcareous, fair trace black tarry oil.
1400-10	Shale as above.
1410-20	Shale as above with trace white, chalky streaks.
1420-30	Shale as above with trace white chalky steaks, sample more calcareous.

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1430-40	Shale as above with trace white chalky steaks.
1440-50	Shale as above with trace white chalky steaks.
1450-60	Shale as above.
1460-70	Shale as above.
1470-80	Shale light to dark brown, tan, cream-tan, very dolomitic, den, brittle, blocky, sub-waxy lustre, with scattered trace vein filling brown to white calcite, occasional trace black tarry oil alongfracture, dull tan to yellow-brown fluorescence green-yellow after application of CCl_4, very good cut trace pyrite.
1480-90	Shale as above with white to light tan chalky streaks, trace honey combed calcareous, heavily stained.
1490-1500	Shale as above with white to light tan chalky steaks.
1500-10	Shale as above heavily saturated oil shale.
1510-20	Shale as above heavily saturated oil shale, very good trace vein filling calcite.
1520-30	Shale as above heavily saturated oil shale, very good trace vein filling calcite.
1530-40	Shale as above moderately saturated oil shale fair trace calcite.
1540-50	Shale as above moderately oil shale fair trace calcite.
1550-60	Shale as above with trace calcite.
1560-70	Shale as above with trace calcite, trace pyrite.
1570-80	Shale as above with trace calcite, trace pyrite.
1580-90	Shale as above with trace calcite, trace pyrite.
1590-1600	Shale as above becoming much lighter in color (predominately light tan, cream-tan) very calcareous.
1600-10	Shale as above fair to calcite crystalline.
1610-20	Shale as above good trace calcite vein filling material.
1620-30	Shale as above good trace calcite vein filling trace ploty gypsum.
1630-40	Shale as above good trace calcite vein filling trace platy gypsum.
1640-50	Trace shale as above good trace calcite vein filling trace platy gypsum.
1650-60	Shale as above.
1660-70	Shale as above.
1670-80	Shale as above.
1680-90	Shale, light to very dark brown, tan, cream-tan, very dolomite crypto crystalline appear, sub-wxy lustre firm, brittle, good cut with CCl_4, trace calcite crystalline.
1690-1700	Shale as above with weak trace calcite crystalline.
1700-10	Shale as above with weak trace calcite crystalline.
1710-20	Shale as above with weak trace calcite crystalline, trace pyrite.
1720-30	Shale as above with weak trace pyrite.

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1730-40	No samples, trip
1740-50	Shale, light to very dark brown, tan, cream-tan, very dolomitic crystalline appear, sub-waxy lustre den, hard brittle, good cut with CCl_4, weak trace calcite crystalline.
1750-60	Shale as above weak trace calcite and pyrite.
1760-70	Shale as above weak trace calcite and pyrite.
1770-80	Shale as above.
1780-90	Shale as above.
1790-1800	Shale as above.
1800-10	Shale as above.
1810-20	Shale as above.
1820-30	Shale as above
1830-40	Shale as above good oil saturated shale.
1840-50	Shale as above good oil saturated shale.
1850-60	shale as above.
1860-70	Shale as above.
1870-80	Shale as above good oil saturated shale.
1880-90	Shale as above good oil saturated shale.
1890-1900	Shale as above good oil saturated shale.
1900-10	Shale as above
1910-20	Shale as above.
1920-30	Shale as above with trace shale, brown, dark brown, soft pliable, sub-fissle.
1930-40	Shale as above with considerable black, very dark brown, heavily oil saturated, shale.
1940-50	Shale as above.
1950-60	Shale, light brown to dark brown, light tan, amber resineous lustre, waxy, varved, soft plastic to firm brittle, very good yellow fluorescence, very good cut with CCl_4, heavily oil saturated.
1960-70	Shale as above with trace calcite, sample becoming more indurated
1970-80	Shale, very dark brown to black, with light tan to brown, firm blocky, brittle to soft sub-fissle plastic, considerable oil saturated, good cut with CCl_4, trace pyrite.
1980-90	Shale as above.
1990-2000	Shale as above slightly more sesineous.
2000-10	Shale as above with fracture and vein filling calcareous, (good porosity and prem.) well saturated oil shale, trace pyrite.
2010-20	Shale as above with trace calcite.
2020-30	Shale as above with very limy cream, cream-tan, argillaceous, shale.
2030-40	Shale as above trace dolomitic limestone, tan, light gray-tan, argillaceous micro to crystalline trace pyrite, oil stained.
2040-50	Shale as above trace dolomitic limestone tan, light gray-tan.

2050-60 Shale as above good trace dolomitic limestone, light tan, cream-tan, micro crystalline argillaceous with trace pyrite, oil stained.

2060-70 Shale as above with considerable dolomitic limestone, dolomite as above fair trace pyrite trace calcite vein material.

2070-80 Dolomitic limestone, dolomite as above with trace shale, as above trace pyrite, and calcite.

2080-90 Dolomitic limestone, dolomite as above becoming more argillaceaous.

2090-2100 Dolomitic, dolomite limestone as above with trace shale, trace pyrite.

2100-10 Shale, very dark brown, brown, black, firm, blocky calcareous oil saturated streaks very carbonaceous zones.

2110-20 Shale as above with good trace dolomitic limestone dolomite, light tan, tan, light gray, crypto to micro crystalline, slightly argillaceous den tite, oil stained, yellow-brown, fluorescence slow but good cut with CCl_4.

2120-30 Interbedded, shale, dolomite and dolomitic limestone as above.

2130-40 Dolomite, dolomitic limestone, light brown, light tan, tan, cream-tan, crypto to micro crystalline den brittle tests good, yellow-tan, yellow-brown fluorescence slow cut with CCl_4.

2140-50 Dolomite, dolomitic limestone, as above becoming more argillaceous.

2150-60 Dolomite, dolomitic limestone as above with interbedded light brown, brown, firm calcareous, shale.

2160-70 Shale, as above with trace dolomite, dolomitic limestone.

2170-80 Shale black, light to very dark brown, light to dark tan, dolomite, den brittle, tite with good light brown oil stain waxy appear. with trace dolomite, dolomitic limestone as above.

2180-90 Shale and dolomite, dolomitic limestone as above.

2190-2200 Shale as above with weak trace dolomite, dolomitic limestone.

2200-10 Shale as above with weak trace dolomite, dolomitic limestone, very good oil saturated, trace pyrite.

2210-20 Shale as above with weak trace dolomite, dolomitic limestone, fair oil saturation.

2220-30 Dolomite, shale very light gray, very light green-gray, firm, sub-blocky, with interbedded tan to brown shale as above.

2230-40 Shale, very light gray, very light green-gray, firm, sub-blocky, dolomite, trace pyrite, trace brown to tan, oil shale scattered yellow fluorescence, slow cut with CCl_4 on scattered pieces.

2240-50 Shale as above light gray, light green-gray, tan to brown, scattered cut with CCl_4.

2250-60 Shale as above with trace dolomite, tan, cream-tan, crypto crystalline, slightly argillaceous scattered yellow fluorescence and cut with CCl_4.

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2260-70	Shale as above with dolomite, tan, cream tan, crypto crystalline slightly argillaceous, scattered yellow fluorescence and cut with CCl_4.
2270-80	Shale as above with dolomite, tan, cream-tan, crypto crystalline slightly argillaceous, trace calcite crystalline.
2280-90	Shale as above with trace tan, cream-tan, crypto crystalline trace calcite crystalline.
2290-2300	Shale light to dark brown, light gray, light green-gray, dolomite den firm, tite, trace cream-tan, slightly argillaceous dolomite.
2300-10	Shale as above with good amount dolomite, dolomitic limestone, cream-tan, den hard tite, very good sorting gas kick.
2310-20	Shale with trace dolomite, dolomitic limestone as above
2320-30	Shale as above with dolomite, dolomitic limestone as above.
2330-40	Shale as above with dolomite, dolomitic limestone as above.
2340-50	Shale as above with dolomite, cream-tan, light tan, crypto to micro crystalline very argillaceous slightly sub-waxy lustre, den, tite scattered yellow fluorescence with good cut with CCl_4.
2350-60	Shale, and dolomite as above sample fairly poor very fine pieces.
2360-70	Shale and dolomite as above.
2370-80	Shale and dolomite as above.
2380-90	Shale as above very dolomitic, trace dolomite.
2390-2400	Shale as above with argillaceous dolomite as above.
2400-10	Shale as above with argillaceous dolomite as above.
2410-20	Shale as above with argillaceous dolomite as above, sample becoming darker brown.
2420-30	Shale as above with trace argillaceous dolomite.
2430-40	Shale as above trace dolomite as above.
2440-50	Shale as above.
2450-60	Shale light to very dark brown, tan, cream-tan, firm, blocky very dolomitic, sub-waxy to waxy lustre, slightly resineous appearance, with scattered yellow fluorescence, very good cut with CCl_4, trace cream tan, very dolomitic shale.
2460-70	Shale as above.
2470-80	Siltstone, very light gray, slightly green-gray, very fine grained, calcareous, argillaceous, with shale as above, scattered yellow fluorescence, scattered, cut with CCl_4.
2480-90	Siltstone and sandstone as above.
2490-2500	Sandstone, sand, light gray, light green-gray, very fine to fine grained, with occasional medium grain, sub-angular to sub-reunded, clear, frosted weak trace amber, rose quartz trace light gray chert, trace yellow-green, black accessory mineral, fair sorting, friable to unconsolidated, slightly calcareous, trace shale as above scattered yellow fluorescnece scattered weak cut with CCl_4.

2500-10	Sandstone as above with trace light green-gray, light green, shale inclusions trace shale as above cavings?
2510-20	Sandstone as above trace light gray shale inclusions.
2520-30	Interbedded sandstone and light gray-green shale, with trace tan to brown oil shale.
2530-40	Shale light to dark gray, light green-gray, very firm, sub-blocky, calcareous sub-waxy lustre, bentonite, considerable cavings oil shale.
2540-50	Shale as above
2550-60	Shale, light to dark brown, tan cream-tan, firm den, tite, very dolomitic trace pyrite, micaceous good scattered yellow fluorescence, with scattered cut with CCl_4, weak trace light gray, light green-gray shale as above.
2560-70	Shale as above.
2570-80	Shale as above.
2580-90	Shale as above.
2590-2600	Shale, very dark brown to light brown, with trace tan, slightly resineous appear, waxy, plastic to firm brittle, scattered good cut with CCl_4; scattered fluorescence.
2600-10	No samples, trip.
2610-20	Siltstone, light gray, light green-gray, very fine grained, very argillaceous, very calcareous to dolomitic, firm, tite with trace light gray, light green-gray, dolomite, shale very weak trace brown shale as above.
2620-30	Interbedded limestone, cream-tan, dolomite cream, crypto to micro crystalline, moderately firm, tite slightly trace micro oolites trace very samll ostracodal foss. and frogs, very, with trace very thin micro-succrosic, streaks, shale black very dark brown, to tan, firm, calcareous, sub-waxy to resineous, scattered yellow fluorescnece scattered cut with CCl_4.
2630-40	Siltstone, sandstone, very light gray, gray, very fine to fine grained quartz grains, angular to sub-rounded, clear frosted, fair sorting, friable, with weak trace very poor porosity, with very scatteredbrown oil stain, very scattered cut with CCl_4, trace oolitic and ostracodal cream-tan lime-stone as above, good trace shale gray, green-gray, frim, blocky dolomite, trace micro micaceous, trace pyrite.
2640-50	Sandstone siltstone as above with shale, light gray-green, green, light gray, calcareous, silty bentonite, trace micro mica.
2650-60	Siltstone, sandstone, white very light gray, very fine grained to fine grained, with occasional medium grained, angular to sub-rounded, clear, frosted quartz grains, fair sorting, trace mica, sub-friable, clean, very calcareous, trace poor porosity, no fluorescence, no cut with CCl_4, fair trace shale light green-gray, firm, micro mica, calcareous, with scattered silty streaks.

2660-70	Shale very dark gray, firm, micro micaceous, calcareous, no fluorescence or cut, fair trace tan to brown, firm, dolomite shale cavings?
2670-80	Shale as above with trace interbedded, white, very fine grained, sandstone, weak trace light gray, micro crystalline argillaceous, dolomite.
2680-90	Shale as above with very good trace interbedded sandstone, white, very fine to fine grained, angular to sub-rounded, clear, frosted, quartz grains, trace light orange and pink grains, trace light to dark gray chert grains, trace mica, fairly clean, fair sorting, calcareous friable, with poor porosity, no show.
2690-2700	Shale and sandstone, as above becoming predominately dolomitic, dolomitic limestone, cream-tan, crypto to micro crystalline, den tite, trace scattered silty streaks, good yellow, yellow-tan mineral fluorescence, no cut with CCl_4.
2700-10	Dolomite, dolomitic limestone, light to dark cream-tan, light gray, cream-tan, micro-crypto crystalline, very ostracodal trace pseudo oolites predominately, den tite, with scattered very poor interbedded crystalline and fossil, porosity, very scattered trace brown oil residue along porous streaks, 20% good yellow fluorescence, very good cut with CCl_4, trace shale and sandstone as above.
2710-20	Dolomite, dolomitic limestone, as above, copious ostracods, good trace green-gray, firm calcareous shale cavings.
2720-30	Sandstone, white, light tan, fine grained, angular to sub-rounded, clear, frosted quartz grains, weak trace black chert grains, clean well sorted, dolomite with poor porosity, 75% of sample stained with brown oil, good speckled yellow green-yellow fluorescence excellent cut with CCl_4, trace light green, light gray-green, very fine grained, argillaceous shale trace ostracodal limestone as above.
2730-40	Sandstone as above with considerably less stain fair trace light green-gray, firm calcareous, shale with scattered silty and sandy streaks.
2740-50	Shale, light green-gray, light gray-green, firm, calcareous, with silty and sandy streaks, trace sandstone as above.
2750-60	Shale as above with trace very light gray, dolomitic shale.
2760-70	Lomestone, cream-tan, very light cream-tan, micro crystalline sub-chalky, very ostracodal, trace pseudo-oolites, very scattered very poor trace porosity, with very scattered brown oil flecked stain, good yellow fluorescence, with very scatt ered cut, with CCl_4.
2770-80	Limestone as above with good trace sandstone, white very fine grained, calcareous, clear, with scattered spotty brown oil stain, trace light green argillaceous cementing material poor sample.

2780-90	Siltstone and sandstone, as above with trace brown, dark brown, firm, calcareous, oil shale.
2790-2800	Siltstone, sandstone, as above with fair trace interbedded, green-gray, firm, calcareous shale.
2800-10	Shale, light green-gray, light gray, firm, dolomite sub-waxy, lustre, with silty and sandy streaks.
2810-20	Shale, light green-gray, light gray, firm, dolomite sub-waxy lustre, trace micro-micaceous, very weak trace limestone cream light cream-tan, micro-crystalline, very weak trace siltstone, white, calcareous.
2820-30	Shale as above with limestone as above trace ostracoda with very scattered , trace brown, to black residual oil stain.
2830-40	Sandstone, white very light gray, very fine grained calcareous no apparent porosity, no stain, trace limestone as above.
2840-50	Sandstone, white, very light gray, very fine grained quartz grains, slightly micro-micaceous, well sorted calcareous, clean friable, with poor porosity, very scattered brown oil stain, scattered fluorescence, show, weak cut with CCl_4.
2850-60	Interbedded, sandstone as above with limestone, cream, cream-tan, micro-crystalline, ostracodal, slightly oolitic, very scattered, very poor porosity, with very scattered brown oil stain, good fluorescence fair cut with CCl_4.
2860-70	Interbedded sandstone and limestone as above predominately sandstone, with trace shale, light green-gray, firm dolomite, sub-waxy lustre, slightly micro-micaceous.
2870-80	Sandstone, limestone as above with good trace shale as above.
2880-90	Sandstone, limestone as above with good trace shale as above.
2890-2900	Sandstone, light tan, white, very fine, to fine grained, clear, frosted, angular, sub-rounded, quartz grains, trace light to dark gray chert, clean, friable calcareous, matrix with poor porosity, 80% sample stained with light to medium brown oil, very good fast cut with CCl_4.
2900-10	Sandstone as above with trace gray-green, firm dolomitic shale.
2910-20	Sandstone, as above with shale light green-gray, light gray firm, dolomite, sub-waxy lustre, slightly micro micaceous.
2920-30	Shale as above.
2930-40	Shale as above trace cream-tan, cream, limestone.
2940-50	Interbedded sandstone, white, very fine to fine grained calcareous, friable, with limestone, cream, cream-tan, micro crystalline, very scattered weak show.
2950-60	Limestone, cream, cream-tan, oolitic, ostracodal, with light gray, gray, cream oolites and ostracods with scattered poor porosity, good yellow-fluorescence with weak cut with CCl_4 trace sandstone as above.
2960-70	Interbedded sandstone and limestone as above trace shale, light gray, gray-green, firm, dolomite.
2970-80	Interbedded sandstone and limestone as above predominately sandstone with trace shale streaks.

2980-90	Sandstone as above, with good trace shale, light green-gray, light gray, firm, dolomite, slightly micro-micaceous.
2990-3000	Sandstone as above with good trace shale, light green gray, light gray, firm, dolomite, slightly micro-micaceous.
3000-10	Interbedded sandstone and shale, 60% sandstone, with very scattered brown oil stain in sandstone white to pyrite.
3010-20	Interbedded sandstone shale, 70% sandstone scattered brown oil stain in sandstone, white to pyrite.
3020-30	Interbedded sandstone and shale, 70% sandstone scattered brown oil stain in sandstone white trace pyrite.
3030-40	Interbedded sandstone and shale 70% sandstone scattered brown oil stain in sandstone trace pyrite.
3040-50	Sandstone, white very light gray, very fine to fine grained, clear, frosted angular, sub-angular quartz grains, trace pyrite, micro micaceous, calcareous, clean, fairly well sorted, trace cream-tan, limestone inclusions, occasional ostracodal with very scattered very poor porosity, gaudy quartz scattered, white trace brown oil stain, very poor cut trace interbedded shale, light gray-green, green-gray.
3050-60	Sandstone and shale as above.
3060-70	Sandstone and shale as above with increase in shale weak trace limestone, cream-tan, micro crystalline oolitic ostracodal
3070-80	Sandstone, shale, limestone as above.
3080-90	Shale, light to dark brown, tan, gray-tan, sub-fissle, firm, calcareous, good yellow, fluorescence very good cut with CCl4 trace limestone, dolomite limestone, cream-tan, micro, crypto crystalline, den tite, trace ostracods.
3090-3100	Shale as above with trace dolomite limestone as above.
3100-3110	Interbedded sandstone, white very light gray, very fine to fine grained, limy, very ostracodal, oolitic, with light gray to black, cream, oolitics and ostracodal trace pyrte, and shale black, dark gray, fissle to blocky, very slightly calcareous firm, slightly micro-micaceous, scattered yellow fluorewcence mostly mineral, very slow, weak cut with CCl_4.
3110-20	Shale, black, gray, gray-brown, brown, sub-fissle to blocky, slightly calcareous, trace brown oil shale, trace oolitic ostracoda sandstone as above.
3120-30	Sandstone light gray, very fine to fine grained, clear, frosted, angular, sub-angular quartz trace gray to black chert, trace mica pyrite, clear, very calcareous, no porosity, no fluorescence or cut trace gray-green, gray shale as above.
3130-40	Sandstone as above with trace shale, trace ostracoda (cavings)
3140-50	Shale, gray, gray-brown, brown firm blocky to sub-fissle, trace sandstone as above to show.
3150-60	Shale as above with sandstone and sandy limestone oolitic.
3160-70	No samples, trip for N. B.
3170-80	Limestone, cream, cream-tan, very ostracodal, oolitic with micro crystalline, matrix, with scattered very fine quartz grains, weak trace very poor inter fragment porosity, with dark brown oil stain, on 10-15% sample.

3180-90	Limestone as above, with very sandy streaks, with trace shale as above, with very sandy streaks, with trace shale gray, green-gray, firm, blocky, slightly calcareous.
3190-3200	Sandstone, white very light gray, very fine to fine grained, very calcareous, with scattered friable sks, with weak trace very poor porosity, trace ostracodal limestone inclusions, as above with interbedded, gray green-gray, fissle shale, trace pyrite.
3200-10	Sandstone as above with light cream, limestone inclusions trace oolites, ostracods, fair trace shale.
3210-20	Sandstone, limestone and shale as above with fair amount gray-green, green, gray, slightly micaceous calcareous, fissle shale.
3220-30	Sandstone, shale as above with good trace shale dull brown-red, very dull rusty red, calcareous firm, blocky, very few pieces sandstone, saturated with brown oil.
3230-40	Sandstone shale as above with predominately, gray-green, green-gray, micro-mica.
3240-50	Sandstone as above with drab varicobred shale.
3250-60	Sandstone, white, very fine grained, angular, sub-angular, clear, frosted quartz grains, with trace gray chert grains very weak trace green accessory mineral, trace mica, trace pyrite, clean, friable very calcareous, scattered fair porosity with trace brown oil stain (1%).
3260-70	Sandstone as above with trace gray shale.
3270-80	Sandstone as above with gray shale.
3280-90	Shale, light green, light gray-green, firm, blocky calcareous, slightly micro-micaceous, trace sandstone as above trace pyrite.
3290-3300	Sandstone, light gray, white, very fine to fine grained, very calcareous, slightly micro-micaceous trace pyrite very poor to no porosity, trace shale as above.
3300-10	Sandstone, light gray, white, very fine to fine grained as above very calcareous trace pyrite very poor to no porosity trace shale as above very micaceous.
3310-20	Sandstone as above with trace shale.
3320-30	Shale, very dark gray, gray, gray-brown, firm blocky calcareous slightly micro micaceous trace brown oil shale.
3330-40	Shale light to dark brown, gray brown, firm, blocky, calcareous, scattered yellow fluorescence good cut with CCl_4.
3340-50	Shale, gray, light gray, gray-brown, firm, calcareous blocky sub-waxy, slightly micro micaceous.
3350-60	Shale as above with considerable brown, dolomite, oil shale.
3360-70	Shale as above with sandstone, white, very fine to fine grained, calcareous, friable, with poor porosity and interbedded siltstone white very light gray, very light green, calcareous, bentonite, calcareous with occasional piece sandstone with brown oil stain.
3370-80	Shale and sandstone as above.

3380-90	Sand trace sandstone white very light gray, very fine to fine grained, unconsolidated to limy matrix very poor sample.
3390-3400	Sandstone, light gray, very fine to fine grained, clear, frosted, angular to sub-rounded quartz grain, with trace micro oolites, limy matrix firm tite with no apparent oil stain occasional piece gavings sandstone with brown oil stain trace shale light gray, light green-gray, calcareous firm, slightly micro micaceous.
3400-10	Sandstone as above with trace shale, very weak trace brown oil stain.
3410-20	Interbedded sandstone and shale as above 50-50, with trace cream-tan, limestone.
3420-30	Interbedded sandstone and shale as above 50-50, with trace cream-tan, limestone.
3430-40	No cuttings available, no returns.
3440-50	Sandstone, light gray, light gray-tan, very fine grained, calcareous, firm tite with rare occasional piece with brown oil stain, trace shale, light to dark gray, gray-brown, green-gray, firm, slightly calcareous, slightly micro micaceous trace pyrite, poor samples.
3450-60	Shale and sandstone as above, no show.
3460-70	Interbedded sandstone and shale as above, no show.
3470-80	Interbedded sandstone and shale as above, predominately shale with trace limestone tan, cream-tan, ostracodal.
3480-90	Shale as above with trace sandstone, with trace limestone.
3490-3500	Shale, light gray-green, green-gray, green-brown, firm, sub-blocky, sub-waxy lustre, slightly calcareous scattered silty streaks.
3500-10	Shale as above with silty inclusions, limy micaceous.
3510-20	Shale as above.
3520-30	Shale as above.
3530-40	Shale as above.
3540-50	Shale as above with slightly increase in tan, green-tan, shale.
3550-60	Shale as above
3560-70	Shale as above with trace tan shale.
3570-80	Shale as above with trace tan, light brown, sub-waxy oil stain slightly cut with CCl_4, trace siltstone.
3580-90	Shale as above with fair trace tan, light brown, sub-waxy oil stain slightly cut with CCl_4 trace siltstone.
3590-3600	Shale as above with fair trace light brown, sub-waxy oil stain slightly cut with CCl_4, trace siltstone.
3600-10	Shale, light to dark brown, tan, black, gray, firm, sub-waxy lustre, slightly calcareous, dull tan, fluorescence, slightly cut with CCl_4, very weak trace sandstone, light tan, fine grained, angular, clear quartz grains, calcareous, trace black and green, accessory mineral, fair porosity good cut with CCl_4.
3610-20	Shale as above.

3620-30	Shale as above with trace sandstone, very light green-gray fine grained very dolomitic, den tite.
3630-40	Shale as above.
3640-50	Shale as above, with considerable, light gray-green, green-gray, sub-waxy, calcareous, shale.
3650-60	Shale, light gray-green, green-gray, sub-waxy, firm calcareous, trace brown to tan shale as above.
3660-70	Shale as above with trace siltstone, light gray, limy, den tite slightly micro micaceous.
3670-80	Shale as above with fair to siltstone as above, very weak trace sandstone, white very fine grained limy.
3680-90	Shale as above with fair trace siltstone as above very weak trace sandstone, white very fine grained, calcareous, with very scattered very poor porosity, weak trace light brown oil stain.
3690-3700	Interbedded shale and siltstone as above with weak trace sandstone as above, trace white chalky limestone.
3700-10	Interbedded shale and siltstone as above very weak trace sandstone as above trace white chalky limestone.
3710-20	Interbedded shale and siltstone as above trace white buff weak, buff-tan, micro crystalline limestone with scattered black to brown flecks no fluorescence.
3720-30	Shale, gray-green, light gray, very light green-gray, gray-brown, sub-fissle, sub-waxy lustre, calcareous, slightly micro-micaceous with weak trace siltstone inclusions.
3730-40	Shale as above with considerable, gray-brown sub-waxy calcareous shale slightly cut with CCl_4.
3740-50	Shale as above with considerable, gray-brown, drab red-brown, sub-waxy calcareous, shale.
3750-60	Shale as above with considerable, gray-brown, sub-waxy, calcareous shale.
3760-70	Shale as above with trace siltstone, white, light green, light gray-green, calcareous, argillaceous weak trace sandstone, light tan, very fine grained, calcareous, with brown oil stain, good cut with CCl_4, trace brown, vein filling calcareous, oil stained.
3770-80	Shale as above becoming more tan and brown, weak trace limestone, buff white micro crystalline, sub-waxy, chalky, with trace interbedded crystalline, porosity, trace light brown oil stain, good fluorescence and cut.
3780-90	Shale, brown to tan, light gray-green, green-gray, very dark brown, to black, resinous, to sub-waxy, calcareous, with yellow-tan, to yellow-brown, fluorescence.
3790-3800	Shale brown, tan, waxy, dolomite, oil shale, trace gray, light gray-green, sub-waxy, calcareous shale.
3800-10	Shale as above.
3810-20	Shale as above.
3820-30	Shale as above with trace sub-gilsonitic streaks trace black tarry shale, greasy appear.

3830-40	Shale as above with trace compressed ostracoda shells, trace fish scale fragment.
3840-50	Shale as above with trace fish scale fragment.
3850-60	Shale as above with trace ostracoda, trace white, to cream speckled brown shale, trace dolomite, dolomitic limestone, dark-tan, gray-tan, micro crystalline, ostracodal, brown oil stained, scattered good yellow, fluorescence and cut with CCl_4, trace oil saturated vein calcareous.
3860-70	Shale as above with trace dolomite, brown, crypto to micro crystalline, den tite trace cal carmentic streaks, slightly show brown oil stain.
3870-80	Shale as above weak trace dolomite.
3880-90	Shale as above weak trace dolomite, trace fish fragment.
3890-3900	Shale, light to very dark brown, brown-black, tan, waxy slightly calcareous, oil shale, trace dolomite dolomitic limestone brown, micro crystalline, den tite, with scattered trace ppvp, with black stain, trace saturated dolomitic limestone trace ostracoda trace white platy gypsum.
3900-10	Shale as above with trace dolomite, limestone, with saturated streaks, trace ostracoda.
3910-20	Shale, light to dark brown, black, firm, blocky, with trace limestone light brown, tan, micro crystalline with scattered ostracodal streaks coquina, scattered streaks of oil saturation.
3920-30	Shale as above with weak trace limestone and dolomite as above with good cut with CCl_4.
3930-40	Shale as above with trace limestone and dolomite, as above good cut with CCl_4.
3940-50	Shale, light to dark brown, trace black, waxy oil shale, trace light gray-green, green-gray, sub-waxy, calcareous, shale, fair trace, dolomite, brown, crypto to micro crystalline, den tite with very scattered pieced brown oil saturated.
3950-60	Shale and dolomite as above.
3960-70	Shale as above with weak trace sandstone, white, very fine grained, calcareous, firm tite, trace very light green, very light gray siltstone, trace dolomite as above.
3970-80	Shale, gray, green-gray, black, brown, sub-waxy to waxy lustre slightly calcareous, with brown oil shale, weak trace sandstone and dolomite as above with scattered brown oil stain.
3980-90	Gilsonite, very dark brown-black, shiny sheen, with trace interbedded black, sub-waxy, shale with trace micro-ostracodal.
3990-4000	Gilsonite and shale as above becoming more shaly, fuss. shell fragment, weak trace tan, micro-crystalline limestone, very weak trace sandstone light tan, very fine grained oil stained.
4000-10	Shale black, sub-fissled, firm, slightly calcareous with trace interbedded gilsonite, very weak trace sandstone, light gray, very light tan, very fine to fine grained, angular, sub-angular clear, frosted quartz grains, clean, calcareous, with scattered poor porosity, with scattered gilsonitic flecks, light brown stain no fluorescence or cut.

4010-20	Shale as above with trace limestone very light cream-tan, micro crystalline, slightly chalky streaks, slightly trace ostracods, scattered very poor inter fragment and crystalline porosity with brown oil stain trace fossil, shell fragment, slightly salt and pepper irredescent very weak trace gilsonite.
4020-30	Shale as above with very weak trace gilsonite, very slightly scattered trace very fine grained quartz, sandstone.
4030-40	Shale as above, loging circulation, sample poor.
4040-50	Shale, light to very dark gray, gray-brown, trace brown, sub-fissle to black firm, with calcareous streaks, waxy to sub-waxy lustre with trace dolomite, tan, brown, gray-tan, crypto-micr crystalline, den tite with yellow fluorescence good cut with CCl_4.
4050-60	Shale as above with trace dolomite.
4060-70	Shale as above with 900 trace dolomite, brown, tan, crypto to micro-crystalline, with oil saturated streaks, with weak trace limestone, very light cream tan, micro-crystalline, sub-chalky with trace ostracoda.
4070-80	Shale, black, brown-black, with trace brown, firm sub-fissle, slightly micro-micaceous, with very scattered silty streaks trace fossil fragment weak trace sandstone, light gray, very fine grained quartz grains, calcareous, black stained.
4080-90	Shale as above with weak trace brown, den oil saturated dolomite.
4090-4100	Shale as above weak trace tan, micro to medium crystalline limestone.
4100-10	Shale as above weak trace tan, micro to medium crystalline limestone, very poor sample.
4110-20	Shale as above weak trace tan, micro to medium crystalline limestone very poor sample.
4120-30	No samples due to lost circulation and by passing shale shaker.
4130-40	Limestone, light to dark brown, tan, crypto to micro crystalline den tite, with trace ostracodal oolites, trace fossil, pelec, fragment, very weak yellow-brown, fluorescence, slightly cut with CCl_4 poor sample.
4140-50	Limestone as above trace shale.
4150-60	Limestone as above with fair trace brown, gray-brown, sub-waxy, calcareous shale.
4160-70	Shale black, brown-blocky, firm sub-fissle, carbonaceous, with light tan, irredescent fossil fragment.
4170-80	Shale and limestone as above weak trace sandstone white, very fine grained, calcareous, very poor sample.
4180-90	Limestone and shale as above good trace ostracoda, very poor sample.
4190-4200	Shale light gray-green, light green-gray, firm blocky, sub-waxy, slightly calcareous, with scattered silty streaks.
4200-10	Shale as above with white trace siltstone and sandstone, light gray, light green gray, very fine grained, calcareous, den tite.

4210-20	Shale as above with slight reddish-green, sub-waxy calcareous shale slightly increase in silt and sandstone.
4220-30	Limestone, light to dark tan, gray-tan, crypto to micro-crystalline, trace ostracoda, den tite, with trace pyrite, with trace brown chert, dull-golden tan fluorescenee, fair cut with CCl_4.
4230-40	Limestone as above with fair trace shale, tan, waxy calcareous firm.
4240-50	Limestone, light tan, tan, buff-tan, trace brown, crypto to micro crystalline, ostracodal, trace micro-succrosic, very light cream tan limestone with fair porosity, with very weak trace gray-tan waxy shale inclusions, golden-tan fluorescence very scattered good cut with CCl_4.
4250-60	Limestone as above with trace interbedded shale gray-tan, waxy.
4260-70	Limestone as above ostracodal, trace shale gray-tan, waxy.
4270-80	Limestone, as above ostracodal, with good brown oil stained pieces good cut with CCl_4.
4280-90	Limestone as above ostracodal, with scattered good brown oil stained pieces good cut with CCl_4.
4290-4300	Limestone as above with considerable shale light gray, gray-green, gray-tan, sub-waxy calcareous, golden-tan fluorescence with cut with CCl_4.
4300-10	Shale as above with good yellow fluorescence no cut with CCl_4. with trace limestone as above, siliceous limestone amber, light amber-brown.
4310-20	Shale, gray-tan, buff tan, green-tan, waxy, fissle slightly calcareous, trace ostracodal trace limestone as above, shale has golden tan fluorescence very slightly cut with CCl_4.
4320-30	Interbedded shale and limestone as above very ostracodal.
4330-40	Interbedded shale with trace limestone as above very ostracodal.
4340-50	Interbedded shale and with trace limestone as above. very ostracodal.
4350-60	Interbedded shale with limestone as above with very ostracodal with fair trace black, firm, blocky shale.
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4360-70	Sandstone, very light gray, white very light green, very fine to medium grained, angular, sub-rounded, clear, frosted, light green amber rose, quartz grains trace light gray red, chert, trace green and black accessory mineral trace mica, fairly clean, very calcareous, firm with friable streaks, no porosity, no show, with shale, drab purple-red rusty, tan, light to dark gray, gray-green, firm, sub-waxy, slightly calcareous, with silty streaks, trace pyrite.

4370-80 Interbedded sandstone, light gray, green-gray salt and pepper graywacke, fine to medium grained, angular tos sub-rounded, clare, frosted, amber, rose, quartz grains, trace black, green, red chert grained, trace black and green accessory mineral trace mica, very calcareous, poorly sorted, firm, tite, no fluorescence or cut with CCl_4, and shale, varicolored, slightly calcareous, sub-waxy, firm with silty streaks.

4380-90 Shale, light green-gray, light gray-green, mottled green-red, yellow-green, purple-red, yellow-tan, firm blocky, sub-waxy lustre meta-bentonite, trace sandstone as above trace pyrite, no show, trace varicolored limestone concrete.

4390-4400 Shale, brown-red, purple-red, yellow-red, yellow-green, lavendar, green-red, gray-green, firm, meta-bentonite, slightly calcareous.

4400-10 Sandstone, white, very light green-weak, firne to medium grained, angular to sub-rounded, clear, frosted, trace rose quartz grains, trace light gray, black chert grained, trace green and black accessory mineral, calcareous, poorly sorted, firm tite, no show, good trace varicolored shale as above, trace limestone, varicolored concrete.

4410-20 Shale, varicolored with predomancence of light green, gray-greeen sub-waxy, meta-bentonite shale, trace sand grains, very fine to medium grained, angular to sub-rounded, clear, frosted rose, amber, orange, violet quartz grains, trace yellow, tan, gray chert grains, trace brown, den limestone, cavings?

4420-30 Sand, varicolored, very fine to medium grained, with occasional coarse grain, with trace varicolored meta bentonite shale, trace light green-gray, den sandy limestone.

4430-40 Shale, red-purple, dull-rasty-red, red-green, red-brown, light green, very light gray-green, yellow green, sub-waxy, meta bentonite, slightly calcareous firm, very scattered silty streaks.

4440-50 Shale, varicolored, with limestone, buff, light gray, crypto to micro-crystalline, slightly argillaceous, to den tite, brittle, yellow-white flurorescence, no show.

4450-60 Shale varicolored, with silty and sandy (varicolored grains) streaks, trace sand sandstone, varicolored, very fine to medium grained, angular to subrrounded, quartz and chert grains, limy, firm tite, no show.

4460-70 Siltstone, shale, rusty-red, red-brown, purple-red, firm calcareous, trace mica, with fair trace sand, fine to very coarse, angular to spherical, clear, frosted, orange, light rose, amber quartz grains trace light to dark gray, orange chert trace light green, light gray green, waxy meta bentonite shale.

4470-80 Siltstone, shale as above with trace sand grains.

4480-90 Siltstone, shale as above with increase in light green-gray, sub-waxy, meta bentonite, shale, with trace sand.

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4490-4500	Shale, rusty red, red-brown, purple-red, gray-green, with silty streaks, trace mica, calcareous meta-bentonite, very weak trace white, succrossic gypsum, trace buff-tan, crypto crystalline limestone concrec.
4500-10	Shale as above with silty inclusions, weak trace white succrosic gypsum, trace coarse, rounded quartz grains.
4510-20	Shale, varicolored, firm sub-waxy, slightly calcareous, meta-bentonite, with silty and sandy streaks, weak trace white, succrosic gypsum.
4520-30	Shale as above with mottled grays and reds and yellows, increase in siltstone, trace sandstone light orange fine grained, calcareous, trace limestone, buff, buff-orange, crypto xln hard brittle trace pyrite.
4530-40	Shale as above with siltstone inclusions, very weak trace limestone, weak trace white succrosic gypsum.
4540-50	Shale, drab rusty-red, red-purple, red-brown purple, red-green light gray-green, firm, metabentonite, very slightly calcareous with silty and sandy streaks, fair trace sandstone white light gray, slightly salt and pepper, very fine to fine grained, angular, to sub-rounded, clear frosted, rose, orange, quartz grains, trace black and gray chert grains, trace mica, scattered argillaceous streaks, calcareous firm, den tite, trace pseudo, gray-tan, oil stain, trace pyrite, no fluorescence, no cut with CCl_4.
4550-60	Shale very drab varicolored, as above trace sandstone as above no show.
4560-70	Shale, red-purple, rusty-red, red-brown, red-green, mottled yellow-purple, yellow-green, tan, light gray, gray-green, meta bentonite, very firm, brittle with sub-waxy lustre, slightly calcareous with scattered silty and sandy inclusions, trace floating sand grains, and with trace sandstone as above no show.
4570-80	Shale as above with considerable yellow-tan, meta-bentonite shale, with slightly weak trace silt and sandstone streaks.
4580-90	Shale as above predominately yellow-tan, red-tan, red-purple trace weak white crystalline gypsum.
4590-4600	Shale as above, with trace sandstone very light purple, red-purple, very fine to fine grained, with clear white, trace stained, orange, rose quartz grains, trace black and red chert, trace micaceous, calcareous, slightly argillaceous, very firm, tite, trace limestone, concrec, no show, no fluorescence.
4600-10	Shale as above with fair trace sandstone, siltstone as above.
4620-30	Shale as varicolored as above very weak trace white fine xln gyspum.
4630-40	Shale varicolored as above with scattered silty streaks, weak trace sandstone light purple-red very fine to fine grained, argillaceous, calcareous trace gypsum, white, very fine to crystalline.

4640-50	Shale as above with siltstone, sandstone, very light gray, very light green-gray, purple-gray, very fine to fine grained, very, with varicolored quartz and chert grains, angular to sub-rounded trace mica, calcareous, tite, no show.
4650-60	Shale as above with trace siltstone, sandstone as above.
4660-70	Sandstone, very light gray, very light purple-buff, light buff, salt and pepper, very fine to medium grained, angular to sub-rounded, clear, frosted, light orange, light rose amber, with trace black to gray chert grains, trace green accessory mineral trace micaceous, slightly calcareous, slightly kaolinitic, friable trace very poor porosity, no fluorescence, no cut with CCl_4, fair trace varicolored shale trace pyrite.
4670-80	Sand, sandstone as above with fair trace varicolored shale.
4680-90	No returns, trip to mud vp.
4690-4700	Shale, purple-red, red-brown, dard rusty-red, light gray, light green-gray, buff, sub-waxy lustre, meta-bentonite, firm, with scattered silty streaks, with weak trace sandstone, light rusty red, red-purple, very fine grained, agillaceous firm tite trace grenn River shale cavings bleeding gas bubbles.
4700-10	Shale as above with silty inclusions trace sandstone.
4710-20	Shale as above with weak trace silty inclusions trace loose quartz grains.
4720-30	Shale as above becoming brite rusty-red, trace loose quartz grains.
4730-40	Shale as above with silty and sandy streaks, trace buff, den limestone, concrec.
4740-50	Shale as above with fair trace sandstone, white buff, purple-buff, very fine to fine grained, with medium grained streaks, angular, sub-rounded varicolored quartz and chert grains, trace mica, slightly argillaceous, kaolinitic, calcareous firm tite, no fluorescence.
4750-60	No cut with CCl_4, weak trace white, very fine crystalline gypsum.
4760-70	Shale as above good trace siltstone, sandstone, as above, no show.
4770-80	Shale as above with very weak trace siltstone and sandstone, trace very fine crystalline gypsum.
4780-90	Siltstone, rusty-red, red-brown, purple-red, slightly micaceous very calcareous, with shale as above, very weak trace white, very crystalline gypsum.
4790-4800	Siltstone and shale as above with fair trace sandstone, very light red-gray, very light red-tan, very fine to medium grained, angular to sub-rounded, varicolored quartz and chert grains, trace mica calcareous, very argillaceous, firm tite, no porosity, no fluorescence or cut.

4800-10	Sandstone, white light red-white, light red-gray salt and pepper, fine to medium grained, angular to sub-rounded, clear and varicolored quartz grains, trace black and gray, red chert grains, with white and gray, accessory mineral, fieldspar? trace mica, calcareous with scattered argillaceous, streaks trace very poor porosity, no fluorescence no cut with CCl_4, good trace shale as above.
4810-20	Shale varicolored predominate rusty-red, red-purple, meta bentonite, sub-waxy, firm, with slightly calcareous streaks, silty streaks, trace sandstone, white, light gray, pin-buff, salt and pepper, very fine to medium grained varicolored quartz grains, trace chert, trace mica, calcareous slightly kaolinitic, firm, tite.
4820-30	Shale varigated as above.
4830-40	Shale varicolored as above with trace siltstone and sandstone as above.
4940-50	Shale, rusty-red, red-purple, red-brown, yellow-red, yellow-green, green, gray-gree, sub-waxy lustre, meta-bentonite, with scattered silty streaks, calcareous, trace very small limestone nodules, trace floating sand grains, very weak trace gypsum.
4850-60	Shale as above, with trace sandstone, very light purple-red, yellow-tan, buff, very light gray, very fine to fine grained, varicolored quartz and chert grains calcareous, weak trace micaceous, den tite.
4860-70	Shale as above with fair trace siltstone, sandstone, light purple-gray, red-buff, red-purple, very light gray, very fine to fine grained with weak trace medium grain, varicolored quartz, chert grains, slight trace mica, calcareous, very argillaceous streaks.
4870-80	Sandstone, as above with good trace shale as above no show.
4880-90	Shale and sandstone, siltstone, as above decreasing amount sandstone.
4890-4900	Shale, rusty-red, purple red, red-brown, red-gray, red-green, green-gray, light gray, with dominance of reds, firm, sub-waxy lustre, meta bentonite, slightly micro micaceous, with scattered silty inclusions, which are calcareous fair trace sandstone, buff white very light gray, light red-gray, very fine to medium grained varicolored quaretz and chert grains, trace mica, calcareous, with argillaceous streaks, firm, tite, no show, trace limestone varicolored den tite.
4900-10	Shale as above with considerable increase in gray-green, green-gray, light green, sub-waxy shale trace very coarse angular quartz grains trace sandstone as above.

4910-20	Shale as above with increase in grays, gray-greens, dark gray shale, trace siltstone sandstone as above, trace micro nodurar limestone, trace very soft, bentonite, light grange shale.
4920-30	Shale as above with trace siltstone, predominate red-purple, dark rusty red.
4930-40	Shale as above with good trace, very dark gray, black, firm, splintery shale, trace very soft bentonite, light orange shale fair trace dark rusty-red siltstone, slightly micro-micaceous very argillaceous, calcareous, very weak trace gypsum.
4940-50	Shale varicolored with copious, light green-gray, sub-waxy shale, trace siltstone, very weak trace gypsum.
4950-60	Shale varicolored with considerable dark gray, gray to black meta-benotnite shale, trace sandstone, light gray, light red-gray, fine to medium grained varicolored quartz and chert grains argillaceous calcareous, den tite trace limestone coarse, sample burned.
4960-70	Shale, siltstone, purple-red, red-brown, rusty red, meta bentonite, calcareous, firm, with fair trace light red-gray den, limestone, trace varicolored shale as above.
4970-80	Shale, siltstone as above with fair trace, light buff-red, light red-gray, den limestone nodules.
4980-90	Shale, siltstone as above with sandstone, very light red-gray, light gray, light buff-red, very fine to fine grained, varicolored quartz and chert grains, slightly micaceous, calcareous, with argillaceous streaks, den tite no show trace light gray, light red-gray, den limestone nodules, slightly gas kick on mud logger over the last 50 feet.
4990-5000	Shale rusty-red, purple-red, red-brown, red-green, gray, gray-green, firm, meta-bentonite, sub-waxy lustre, with silty and sandy inclusions, trace sandstone, very light gray, buff-white very light green-white, very light green, very light pink-tan, salt and pepper, very fine to medium grained angular to sub-rounded, varicolored quartz and chert grains, calcareous poorly sorted, scattered very argillaceous streaks, no porosity no show.
5000-10	Shale silty shale as above with white trace sandstone.
5010-20	Shale, silty shale as above with increase in green-gray, sub-waxy, silty shale, fair trace sandstone as above, slightly more greenish to very light red-gray, trace limestone, light red-tan, den, tite trace amber inclusions, trace very light orange, soft bentonite, shale.
5020-26	Shale as above with moderate trace sandstone, trace limestone, trace very calcareous, light green-gray, firm shale.
5026-30	No sample, trip for new bit.

5030-40	Shale varicolored as above with silty steaks, calcareous, trace light green-gray, firm, very calcareous shale, very weak trace sandstone, one piece brown-waxy very sandy shale cut with CCl_4.
5040-50	Shale as above with trace limestone, light gray, light green-gray buff-green, light gray-red, crypto crystalline den tite slightly argillaceous, very weak trace very fine grain, calcareous, sand stone, trace gypsum, light pink-white, very fine crystalline.
5050-55	Siltstone, sandstone, light gray, light green-gray, salt and pepper, very fine to medium grained angular to sub-rounded, clear frosted, amber light ornage quartz grains, and light gray, black, tan chert grains, with black and green accessory mineral, fair sorting, calcareous, and kaolinitic, with gray-green, argillaceous streaks, very firm tite, no cut with CCl_4 or fluorescence, fair to trace light green-gray very calcareous shale and limestone, very silty, fair trace varicolored shale.
5056	Siltstone, and sandstone as above with varicolored shale burned sample.
5056-60	Sandstone, very light gray, light green-white salt and pepper fine grained to medium grained, angular to sub-angulare, clear, frosted, amber, trace light orange quartz greens, with black gray red chert grains, trace more, fair sorting fairly clean, kaolinitic, with calcareous , streaks, with friable streaks, scattered trace poor porosity no fluorescence no show, fair trace varicolored shale.
5060-70	Sandstone, white light green-white, salt and pepper, medium coarse grained as above with trace fair porosity, no show, trace pyrite.
5070-80	Sandstone as above, very fine to coarse grained with limy and light green shaly streaks, trace limestone very light green, den tite yellow fluorescence no cut.
5080-90	Sandstone as above, very fine to medium coarse grained, with limy and light green, shaly streaks, very poor porosity, lime-stone very light green, den tite yellow fluorescence no cut trace varicolored shale, fair trace cavings.
5090-5100	Sandstone as above with trace limestone, light green, light green-gray, den tite, trace pyrite trace chalky limestone, fair trace varicolored shale.
5100-10	Sandstone as above with considerable varicolored shale.
5110-20	Sandstone as above becoming finer grained, trace light green, light green-gray, sub-waxy, firm shale trace very light green, light buff green, crypto crystalline, pyriteic limestone.
5120-30	Sandstone, white light green-white, very light purple white, very fine to medium grained, angular to sub-rounded, clear, frosted, amber, trace light orange, and light gray, to black chert, trace green and black accessory mineral, trace mica, calcareous, slightly kaolinitic, firm, with scattered very poor porosity, no show, trace varicolored shale, trace limestone white very light green den, slightly argillaceous, trace pyrite.

5130-40q	Sandstone as above with considerable varicolored shale burned sample.
5140-50	Siltstone, sandstone, very light gray, very light green-gray, very light green-white, salt and pepper, very fine to medium grained, angular to sub-rounded, clear, frosted, amber, very light orange quartz trace gray to black chert grains, trace mica, trace green and black accessory mineral poor to fair sorting, calcareous kaolinitic, firm, tite with scattered very poor porosity, no show trace very light green-gray, shale inclusions, trace very light green den limestone.
5150-60	Siltstone, sandstone as above with considerable varicolored shale.
5160-70	Siltstone and sandstone as above with fair trace varicolored limestone, shale, considerable, gray and green, very calcareous shale.
5170-80	Siltstone and sandstone as above with fair trace varicolored shale considerable gray and green, very calcareous shale.
5180-90	Shale light green, light gray-green, firm, very limy with silty streaks, trace siltstone and sandstone.
5190-5200	Shale as above.
5200-5210	Shale as above, trace varicolored shale.
5210-20	Shale as above, trace varicolored shale, shale as above trace varicolored shale, fair trace sandstone, white light green-white very light green-gray, very fine to medium grained angular to sub-rounded, clear frosted, amber, trace very light orange quartz grains, trace, light to dark gray chert grains, trace, mica calcareous, slightly kaolinitic and argillaceous, very firm to friable with trace poor porosity, no show, fair trace cavings.
5220-30	Shale and sandstone as above weak trace limestone, light green-buff, dne.
5230-40	Shale with moderate trace siltstone, sandstone as above trace limestone.
5240-50	Siltstone, sandstone, light green, light gray-green, light green-white, salt and pepper, very fine to medium grained, calcareous, kaolinitic, with argillaceous, green streaks, very weak and scattered trace poor porosity, trace green-buff den limestone trace green, limy shale.
5250-60	Sandstone, white, light green-white, very light gray-green, salt and pepper, very fine to medium grained, angular to sub-angular clear, frosted, light amber, very light orange quartz grains, trace gray to black chert, trace green and black accessory mineral, trace mica, calcareous, kaolinitic, with scattered light green argillaceous streaks, friable, with fair to very poor porosity, no fluorescence, or cut, considerable shale cavings.
5256	Sandstone as above with fair trace varicolored shale, no show.

5256-60	Sandstone as above with very poor to poor porosity, trace varicolored shale, gas kick, mud and samples, no fluorescence or cut.
5260-65	Sandstone, white, light green-white, very light gray, salt and pepper, very fine to coarse grained, angular to sub-angular, clear, frosted, with trace very light orange, amber, quartz with trace very light gray to black chert grains, trace mica, and black to green accessory mineral, calcareous, kaolinitic, friable to firm with scattered, very poor porosity to fair, no fluorescence or cut, gas kick in mud and sample.
5265-70	Sandstone as above with slightly increase in varicolored shale trace white chalky gypsum, trace limestone, light green-gray, den.
5270-75	Shale and siltstone, varicolored, trace sandstone as above, trace white, micro succrosic gypsum.
5275-80	Shale and siltstone varicolored, trace sandstone as above.
5280-90	Shale, light green, light gray-green, rusty-red, meta-bentonite red-brown, purple-red, yellow-red, sub-waxy lustre, meta-bentonite, firm, with scattered silty and calcareous streaks with trace sandstone as above trace light green-gray, den limestone.
5290-5300	Shale, siltstone as above with trace gypsum, white, very fine crystalline, trace siltstone, sandstone, light green-white, very light gray salt and pepper, very fine to medium grained, calcareous, white scattered very poor porosity, trace limestone light gray, light green-gray den, sandy.
5300-10	Interbedded shale and siltstone, and sandstone, as above, trace white, micro succrosic gypsum, trace den limestone.
5310-20	Interbedded shale and siltstone and sandstone as above with fair trace very coarse, clear, frosted, sub-angular quartz grains.
5320-30	Shale, light gray-green, light green-gray, with trace red-brown, purple-brosn, dull rusty-red, sub-waxy lustre slightly calcareous firm with silty streaks weak trace siltstone, sandstone, very light green-gray, light gray-green, white salt and pepper, very fine to fine grained, calcareous, firm, tite with trace very poor porosity no show weak trace gypsum.
5330-40	Shale varicolored, with stringers of siltstone and sandstone as above, poor sample, lots loss circulation, material.
5340-50	Shale varicolored with stringers of siltstone and sandstone as above poor sample, lots loss circulation material.
5350-60	Shale varicolored with stringers of siltstone and sandstone as above trace light gray-buff, buff, soft, putty like, shale bentonite silty.
5360-80	Siltstone, sandstone, very light green-gray, very light green-white, salt and pepper, very fine to fine grained, angular to sub-angular varicolored quartz and chert grains, trace green, black accessory mineral, trace mica, very calcareous, with light green argillaceous streaks, firm, tite, slightly gas kick from samples when run through blender, very slight gas kick in mud, trace red-brown, dull rusty red with light green, gray-green, sub-waxy, meta bentonite, silty shale.

5370-80	Siltstone, sandstone as above with fair trace red-brown, rusty-red, gray-green, silty, calcareous shale.
5380-90	Siltstone, sandstone as above with trace medium grained, white sandstone, white interbedded varicolored, silty calcareous, shale, trace very light gray, very light gray-green, den limestone.
5390-5400	Shale varicolored, (reds and greens) with silty calcareous streaks, trace light rusty-red, soft bentonite shale, with trace siltstone and sandstone as above with no show.
5400-10	Siltstone, sandstone, very light gray, very light green-gray, very light green-white, salt and pepper, very fine to medium grained, angular, sub-angular, clear frosted, very light orange quartz and light to very dark gray chert trace black and green accessory minerals, trace mica, calcareous to very limy, firm tite, no to trace very poor porosity, no show, fair trace interbedded dark rusty-red, calcareous silty shale.
5410-20	Siltstone, sandstone as above with trace very poor porosity, no cut with CCl_4, gas kick, trace interbedded dark rusty-red calcareous silty shale.
5414-18	Siltstone, sandstone as above with trace very poor porosity, no cut with CCl_4 good gas kick from mud fair trace silty, calcareous meta bentonite, shale.
5418-20	Siltstone sandstone as above trace very poor porosity no cut with CCl_4 good gas kick from mud fair trace silty, calcareous meta-bentonite shale.
5420-30	Siltstone sandstone, shale as above no cut with CCl_4, no fluorescence, good gas kick.
5425-30	Siltstone, sandstone, with increase in shale as above cut with CCl_4, no fluorescence good gas kick.
5430-40	Shale, light green, light green-gray, rusty-red, red-brown, lavendar, yellow-red, sub-waxy lustre, meta-bentonite, firm with calcareous, and very silty streaks, trace siltstone, sandstone, very light green-gray, salt and pepper, very fine to fine grained, limy, firm, tite.
5440-50	Siltstone, light green, light green-gray, limy argillaceous, with varicolored shale, trace very soft, lumpy, bentonite, light orange shale, trace sandstone, white salt and pepper, very fine to medium grained, slightly micaceous, calcareous, firm, no show.
5450-60	Shale, rusty-red, purple-red, red-brown, light gray-green, light green-gray, sub-waxy lustre, meta-bentonite, with silty and calcareous, streaks, with trace siltstone, sandstone light green-gray, light green-white, very fine to fine grained, calcareous, firm tite, trace soft, very bentonite, 18mpy light gray, light rusty-red, shale.

5460-70	Shale as above with fair trace silt and sandstone, very light green-white, very light green-gray, salt and pepper, very fine to medium grained, angular to sub-angular, clear frosted, very light orange, amber quartz grains and light to very dark gray cheet, trace black, green, fair accessory mineral, trace mica, calcareous to limy streaks with argillaceous inclusions. firm tite with weak trace very poor porosity, trace pyrite.
5470-80	Shale, siltstone and sandstone as above trace very light gray, soft, lumpy, silty bentonite shale.
5480-90	Siltstone, sandstone as above good trace vraicolored shale trace lumpy silty bentonite light gray, shale.
5490-5500	Siltstone, sandstone as above with good trace varicolored shale trace lumpy silty bentonite light gray, shale, trace limestone, very light red, very light green-red, den tite, slightly sandy.
5500-10	Sandstone white, very light green-white, very light green-gray, salt and pepper, very fine to medium grained, angular to sub-rounded, clear, frosted very light orange, amber quartz grains, trace light to very dark gray chert grains, trace green, black accessory mineral, scattered trace mica, calcareous to limy, firm tite, with scattered, very poor to fair porosity trace varicolored shale as above.
5510-20	Siltstone and sandstone as above with increase in varicolored shale, trace buff limestone den very firm.
5520-30	Shale varicolored, silty, sub-waxy, firm meta-benotnite with fair trace silt and sandstone as above.
5530-40	Interbedded sandstone, siltstone and shale as above.
5540-50	Shale light to dark rusty-red, red-brown, purple-red, green-red sub-waxy, meta-bentonite, with scattered silty streaks, slightly calcareous, with fair trace silt and sandstone as above.
5550-60	Shale as above with good trace siltstone and sandstone.
5560-70	Shale light green, light green-gray, red-brown, red-purple, sub-waxy, meta bentonite with scattered silty and very limy streaks trace siltstone and sandstone as above.
5570-80	Interbedded shale, varicolored and sandstone, white very light green-white, salt and pepper, very fine to fine grained, angular to sub-angular clear frosted, very light orange, amber quartz grains, and light gray to black chert grains, calcareous to very limy streaks, slight argillaceous, trace kaolinitic matrix, trace very poor porosity, no show.
5580-90	Interbedded shale, rusty-red, red-brown, purple-red, and sandstone as above.
5590-5600	Siltstone, sandstone as above with fair trace interbedded red-brown, green-red, purple-red, meta-bentonite, silty shale, no show.
5600-10	Siltstone, sandstne as above trace interbedded shale as above.
5610-20	Interbedded siltstone, sandstone and shale as above (60% Sandstone).

5620-30	Shale, red-brown, dull rusty-red, red-purple, trace green gray, firm, meta-bentonite, calcareous with silty streaks, trace siltstone, sandstone as above.
5630-40	Interbedded siltstone, sandstone and shale as above (50% sandstone).
5640-50	Siltstone, sandstone, light green-white, white, very light gray, salt and pepper, very fine to fine grained with scattered medium grained streaks angular, to sub-angular, varicolored quartz and chert grains, trace green, black accessory mineral, trace mica, calcareous to limy streaks, slightly kaolinitic, trace green argillaceous streaks, firm, with trace very poor porosity, no show, trace shale, red-brown.
5650-60	Siltstone, sandstone with trace shale, red-brown, very dark dull red-brown, lavendar, purple-red, sub-waxy lustre meta bentonite, with calcareous and silty streaks, trace limestone light gray mottled red, buff, tan, den.
5660-70	Shale, varicolored, firm, sub-waxy, meta-bentonite slightly calcareous with silty streaks, trace of siltstone, sandstone as above.
5670-75	Shale, varicolored as above with trace very light green-gray, calcareous siltstone.
5675-80	Shale as above with good trace sandstone, white, light green-white, very fine to medium grained, angular, sub-angular, varicolored quartz and chert grains, trace mica, trace green, black accessory mineral, calcareous with very limy streaks, slightly kaolinitic scattered green argillaceous streaks, firm tite, with scattered very poor porosity no show, trace shale as above.
5680-82	Siltstone, sandstone as above with scattered very poor to fair porosity, no show fair trace shale.
5682	Siltstone, sandstone as above poor to fair porosity, no show, fair porosity, fair trace shale.
5682-90	Shale, varicolored, waxy, sub-waxy, lustre, meta-bentonite, firm, with calcareous and silty streaks, trace micro limestone concrec.
5690-5700	Shale as above trace siltstone, sandstone, very light green-white, white very light gray, salt and pepper, very fine to fine grained calcareous micaceous.
5700-10	Shale as above weak trace siltstone, sandstone.
5710-20	Shale as above weak trace siltstone.
5720-30	Shale as above with fair trace siltstone, sandstone as above.
5730-40	Shale as above with weak trace siltstone, sandstone as above.
5740-50	Shale as above with trace siltstone and sandstone as above.
5750-60	Shale as above with trace siltstone and sandstone as above.
5760-70	Shale as above with trace siltstone and sandstone as above.

5770-80	Shale as above with good trace sandstne, white, light green-white, salt and pepper, fine to medium grained, angular to sub-angular, clear, frosted very light orange, amber quartz grains, with trace light to dark gray chert grains, trace black green accessory mineral trace mica, fair sorting calcareous, kaolinitic, firm to friable, with scattered very poor porosity to fair porosity.
5780-90	Shale, varicolored, with silty, calcareous streaks meta-bentonite, trace sandstone, siltstone as above.
5790-5800	Shale dark rusty-red, red-purple, brown-red, green-gray, meta bentonite, sub-waxy, slightly calcareous, trace silty streaks, trace micro limestone concrec. very scattered trace gypsum, trace sandstone as above.
5800-10	Shale as above with trace gypsum inclusions trace sandstone.
5810-20	Shale, very light to dark rusty-red, purple-red, red-yellow, yellow, light to dark green-gray, waxy, sub-waxy lustre, slightly calcareous, with scattered silty streaks, firm, blocky, trace micro-limestone concrec.
5820-30	Shale, varicolored as above with weak trace sandstone.
5830-40	Shale varicolored as above very weak trace siltstone, sandstone.
5840-50	Shale, varicolored as above.
5850-60	Shale varicolored as above with increase in gray-green.
5860-70	Shale as above with trace limestone yellow-tan buff-brown, micro crystalline, den tite, yellow fluorescence no cut with CCl_4.
5870-80	Shale varicolored as above trace micro limestone concrec, trace gypsum white, very fine grained.
5880-90	Shale, varicolored as above trace micro limestone concrec.
5890-5900	Shale varicolored as above trace micro limestone concrec.
5900-10	Shale as above with increase in silty and sandy inclusions, trace sandstone, white, very light gray, salt and pepper, very fine to fine grained, calcareous, slightly argillaceous, firm, tite trace pyrite, trace gypsum.
5910-20	Shale as above.
5920-30	Shale varicolored as above, with trace silty inclusions, trace pyrite, gypsum, trace sandstone, white, very light gray, salt and pepper, very fine to fine grained calcareous with argill-aceous streaks, firm tite.
5930-40	Shale as above with sandstone, light gray, very light green-gray, white, salt and pepper, very fine to fine grained aggular to sub-rounded, clear frosted amber, very light orange, quartz grains, trace black, gray chert grains, trace black and green accessory mineral, calcareous, slightly kaolinitic, firm, tite, no cut with CCl_4.
5940-50	Siltstone, sandstone, white, very light green-white, very light green-gray, salt and pepper, fine grained to medium grained, angular to sub-angular, clear, frosted, very light orange amber quartz green, with trace black and gray chert grains, weak trace mica, calcareous, kaolinitic, matrix, scattered light green argillaceous streaks, scattered, very limy streaks, quartzitic fair sorting, firm, tite, no porosity, no fluorescence, no cut with CCl4, trace shale as above.

5950-60	Siltstone and sandstone as above with considerable varicolored shale.
5960-70	Siltstone and sandstone as above no show, no fluorescence, no cut with CCl_4, with trace pyrite considerable varicolored shale, trace white, very fine crystalline gypsum.
5970-80	Shale, varicolored, waxy lustre, meta-bentonite, slightly calcareous, firm, with white trace sandstone, siltstone as above.
5980-90	Shale, varicolored, with considerable yellows as above, scattered very calcareous streaks.
5990-6000	Shale as above with good trace siltstone, sandstone, very light gray, very light green-gray, white, salt and pepper, very fine to fine grained calcareous, to limy, slightly argillaceous very den tite scattered dull yellow-buff fluorescence, no cut with CCl_4.
6000-10	Shale, varicolored, predominate, rusty-red, and gray-green, trace white micro crystalline gupsum, weak trace sandstone, with trace pyrite.
6010-20	Shale varicolored predominate, rusty-red, and gray-green, with very silty streaks, very firm.
6020-30	Shale as above predominate, rusty-red, and gray green, silty streaks, very firm trace shale, gypsum, limestone concrec.
6030-40	Shale as above, with trace limestone, ubff, very light gray buff, crypto crystalline, den tite, weak trace pyrite.
6040-50	Shale, rusty-red, brown-red, green-red, light gray-green, dark-gray, yellow-red, purple, waxy to sub-waxy lustre, meta bentonite, firm, blocky with scattered, calcareous and silty streaks, trace limestone concrec, trace siltstone, sandstone white very light gray, salt and pepper, very fine to fine grained, calcareous, to limy, slightly argillaceous den tite.
6050-60	Shale as above with fair trace sandstone, light gray, white, salt and pepper, fine to medium grained, angular, sub-angular clear, frosted, very light orange, amber quartz grains, trace black and gray chert grains, trace black, green accessory mineral, slightly calcareous, kaolinitic friable to firm, with scattered very poor to fair porosity, no fluorescence, no cut with CCl_4, very slight gas kick, on gas analyzer.
6060-70	Sandstone, white, very light gray, salt and pepper, very fine to medium grained, angular to sub-rounded, clear, frosted, very light orange, amber quartz grains, with black, gray, gray-tan, chert grains, trace black accessory mineral, clean, fair to poorly sorted, calcareous, slightly kaolinitic, firm to friable with scattered very poor to fair porosity streaks, no fluorescence, no cut with CCl_4, trace shale as above.
6070-80	Sandstone, as above becoming siltstone, light to dark gray, dolomite, den, very hard with trace black bituminous inclusions trace pyrite, considerable cavings, trace shale as above.

6080-90	Shale light to medium-gray, slightly calcareous, silty, firm, with siltstone, sandstone, very light gray, medium grain, very fine grained, calcareous, with black bituminous water thin inclusions, trace pyrite, with trace black sub-bitumen coal, no show fair trace varicolored shale cavings, very poor sample.
6090-6100	Sandstone, white, very light gray, slightly salt and pepper, very fine to fine grained, calcareous, with black carbonaceous flecks, firm, den tite, with scattered, friable, very poor porosity streaks, no show, trace gray-green, dark green-gray, firm fissle shale, trace varicolored shale.
6100-06	Shale, varicolored, waxy meta-bentonite, with silty streaks, slightly calcareous, trace limestone concrec, very weak trace sandstone as above.
6106-10	Shale, varicolored as above with trace varicolored limestone concrec, trace sandstne, white, very fine grained calcareous,
6110-20	Shale as above becoming more drab in color trace very light gray, light green-gray, calcareous to limy, very fine grained silty, sandstone, trace bituminous, inclusions, considerable cavings.
6120-30	Shale as above with good trace light gray to black, fissle, slightly micro micaceous, slightly calcareous shale, weak trace coal, very argillaceous trace pyrite.
6130-40	Shale as above with trace siltstone, sandstone, light gray, very fine to fine grained, dolomite, slightly argillaceous.
6140-50	Shale varicolored, with considerable floating sand grains, trace green river, shale and limestone cavings with oil stain.
6150-60	Shale varicolored as above with fair trace siltstone, sandstone very light gray white, salt and pepper, very fine to medium grained, very calcareous, slightly argillaceous, dsn tite, with limestone, buff, light gray-tan, crypto crystalline, silty sandy, hard tite, yellow fluorescence no cut with CCl_4.
6160-70	Sandstone, white, verylight gray, salt and pepper, very fine to fine grained, angular to sub-angular, clear, frosted, quartz grains, with trace black and gray chert grains, trace black and brown, green, accessory mineral, fairly clean, with calcareous to very limy streaks, trace very light green argillaceous inclusions, firm, tite, with scattered very poor porosity, fair trace varicolored shale as above fair trace cavings.
6170-80	Siltstone, sandstone as above, with fair trace shale varicolored trace light gray, buff, den limestone, with ye llow fluorescence no show.
6180-90	Siltstone, sandstne as above with increase in gray-green, calcareous, argillaceous siltstone, fair trace varicolored shale.

6190-6200	Siltstone, sandstone, white very light gray, salt and pepper, very fine to fine grained, to trace medium grained, angular to sub-angular, clear frosted, light amber quartz grains with trace black to gray chert grains, trace black tan, green accessory mineral weak trace micro mica, calcareous to limy, with scattered argillaceous streaks, firm tite with very scattered, trace very poor porosity, no cut with CCl_4, weak trace very poor porosity, no cut, weak trace varicolored shale.
6200-10	Siltstone and sandstone as above with good trace limestone light gray, light green-gray, light tan-gray, crypto to micro xln, very sandy, very argillaceous, den tite, trace green-gray, sub-waxy, slightly calcareous, shale trace varicolored shale cavings?
6210-20	Shale varicolored, predominate, reds and greens sub-waxy lustre firm, meta bentonite, slightly calcareous streaks with silty streaks, fair trace silt and sandstone as above.
6220-30	Shale as above with silt and sandstone as above with trace very limy streaks.
6230-40	Interbedded shale with siltstone and sandstone as above.
6240-50	Shale, varicolored grays, greens, reds, lavendar sub-waxy, meta bentonite, with scattered silty and calcareous streaks, trace siltstone and sandstone as above, with very limy streaks, very weak trace gypsum white, micro-crystalline.
6250-60	Siltstone, sandstone, white, very light gray, salt and pepper, very fine to fine grained, calcareous to limy, den tite, with trace limestone, buff, very light gray, crypto to micro-xln, argillaceous and sandy, trace varicolored shale.
6260-70	Shale, varicolored, sub-waxy, meta-bentonite, slightly calcareous streask, scattered silty inclusions, trace siltstone, sandstone as above with trace limestone.
6270-80	Shale as above with interbedded trace siltstone, and sandstone, white, salt and pepper, very fine grained, limy to calcareous, trace light gray, gray-green, dolomite, silty shale.
6280-90	Shale, red-brown, rusty-red, lavendar, red-yellow, purple-red, light gray, light green-gray, sub-waxy lustre, meta-bentonite, with scattered silty and calcareous streaks.
6290-6300	Shale as above with trace black, sub-fissle, slightly waxy lustre, carbonaceous.
6300-10	Shale as above with very silty inclusions, trace gypsum.
6310-20	Shale as above with fair trace siltstone, sandstone, very light gray, white, salt and pepper, very fine grained, calcareous, dolomite, with scattered very argillaceous streaks, slightly trace micro-mica.
6320-30	Shale as above with increase in gypsum, siltstone, light to medium grain, dolomite, argillaceous.
6330-40	Shale, varicolored as above with calcareous silty streaks, trace micro limestone concrec.

6340-50 Shale, varicolored as above with calcareous silty streaks trace siltstone, sandstone, white very light gray, very fine grained, calcareous, limy, firm, tite, trace gypsum.

6350-60 Shale, varicolored as above trace gypsum, micro limestone concrec.

6360-70 Shale varicolored as above, trace gypsum, micro limestone concrec, trace siltstone, sandstone, white, very light gray, salt and pepper, very fine to fine grained, calcareous to limy, fair to cavings.

6370-80 Shale, varicolored as above with very silty streaks, trace calcareous streaks, fair to limestone concrec.

6380-90 Shale as above mostly gray-gray-green with good trace siltstone, very light green, light gray-green, buff weak, calcareous, to limy, argillaceous trace sandstone, light gray, light green-gray, very fine grained, calcareous to dolomite, argillaceous tite, firm.

6390-6400 Shale, siltstone, sandstone as above.

6400-10 Limestone, light gray-tan, crypto to micro crystalline, firm, brittle, scattered, silt and sandy streaks, dull gray-tan, fluorescence, no cut with CCl_4, trace fossil fragments (mollusks) trace sandstone, white, light gray, salt and pepper, very fine to fine grained, calcareous to limy, firm, den tite.

6410-20 Shale, light to very dark gray, with trace varicolored, sub-waxy, meta-bentonite, with scattered calcareous, and silty streaks trace limestone and sandstone as above.

6420-30 Shale, varicolored, predominate, gray-gray-green, red-brown, purple-red, waxy, sub-waxy meta-bentonite, firm, trace silty and calcareous streaks, very weak trace coal, carbonaceous, very dark gray shale.

6430-40 Siltstone, sandstone, white, light gray, green-gray, slightly salt and pepper, very fine to fine grained, calcareous to limy, firm, tite, trace limestone, green-gray, den tite silty, trace pyrite, trace varicolored shale, predominate green, gray-green, trace varicolored limestone nodules.

6440-50 Siltstone, sandstone as above with trace medium grained, salt and pepper, light gray, white, sandstone, trace limestone, limestone nodules, shale as above.

6450-60 Shale, varicolored, sub-waxy, meta-bentonite, with silty and calcareous streaks, trace limestone, modules, trace gypsum, trace siltstone, as above trace black, very dark gray, carbonaceous, sub-waxy shale, trace coal, trace pyrite.

6460-70 Shale, varicolored as above with silty, sandy and calcareous, inclusions, trace limestone nodules, weak trace black, carbonaceous, sub-waxy shale.

6470-80 Shale as above with trace very brite orange, very firm, silic, meta-bentonite, shale, slightly silty, trace limestone brown, gray, brown, micro to crypto crystalline, brittle, tite.

6480-90 Shale varicolored, as above with very silty, slightly calcareous streaks, trace limestone, nodules, trace light green, very light gray-green, silty, very dolomitic, waxy shale.

6490-6500 Shale as above with trace limestone nodules.

6500-10 Shale as above predominte very light to medium gray, with trace limestone very light gray-green, den firm tite argillaceous very silty, to sandy trace very dark gray to black, sub-waxy carbonaceous, shale.

6510-20 Shale, light gray, light green-gray, with trace reds, sub-waxy, calcareous, silty, with trace limestone, very light gray, light green, buff, dne, tite, argillaceous sitty, trace dull buff fluorescence,.

6520-30 Shale as above with more varicolored shale, with trace black to very dark gray, sub-waxy, carbonaceous, shale, trace coal, trace limestone, buff, very slightly gray, crypto crystalline, den, brittle, with slightly argillaceous very silty, streaks, trace pyrite, trace mineral, fluorescence.

6530-40 Shale, varicolored, waxy lustre, meta-bentonite, with very silty to sandy inclusions, slightly calcareous, trace gypsum, limestone nodules, varicolored, trace limestone buff, buff-green, crypto crystalline, silty and sandy, slightly argillaceous.

6540-50 Shale, varicolored, as above with trace limestone, trace gypsum.

6550-60 Siltstone, sandstone, white, salt and pepper, very fine to medium grained, angular to sub-rounded, clear, frosted, quartz grains, with black to gray chert grains, trace black, tan, green accessory mineral, trace mica, pyrite, very calcareous, firm to friable, with trace very poor porosity, no fluorescence no cut with CCl_4, trace varicolored shale as above trace limestone.

6560-70 Siltstone, sandstone as above with trace medium coarse grained sandstone, no fluorescence, no cut with CCl_4 with fair trace varicolored shale.

6570-80 Shale, grays, greens, reds, trans, sub-waxy, waxy lustre, meta-bentonite, with scattered silty streaks, slight calcareous, weak trace siltstone and sandstone, white, salt and pepper, very fine to medium grained, very calcareous, to limy.

6580-90 Shale, brite yellow, orange, red-orange, yellow-buff, with varicolored grays, green, reds, with floating fine to coarse sub-angular quartz and chert grains, scattered silty streaks trace light tan to brown den limestone, trace pyrite, gypsum, trip samepl.

6590-6600 Shale, varicolored, sub-waxy, meta-bentonite, with silty and calcareous streaks, trace limestone, buff, very den, firm, slightly silty, trace siltstone, very light gray-green, very limy, dan tite.

6600-10 Shale varicolored with silty and sandy streaks, slightly calcareous, streaks, trace limestone nodules, trace limestone, and siltstone as above trace sandstone, light gray, salt and pepper, very fine to medium grained, angular to sub-rounded, clear frosted, quartz grains, trace brown, black gray, chert grains, trace black brown, green accessory mineral, very calcareous, firm tite trace pyrite, no cut with CCl_4.

6610-20 Shale, varicolored with considerable grays, trace very brite orange, red-orange, meta-bentonite, waxy shale, trace limestone nodules, very white trace sandstone as above.

6620-30 Shale varicolored, sub-waxy lustre meta-bentonite with silty to sandy inclusiosn, slightly calcareous streaks, trace sandstone, light green, light buff-green, very fine grained, very calcaseous argillaceous, siltstone.

6630-40 Shale with interbedded sandstone as above trace limestone nodules.

6640-50 Shale varicolored with trace sandstone as above trace limestone nodules trace gypsum.

6650-60 Shale, varicolored with trace siltstone, and sandy inclusions, slightly calcareous, trace limestone nodules, varicolored.

6660-70 Shale, light to dark gray, green, light gray-green red-purple dark rusty-red, yellow, buff-tan, waxy, sub-waxy, meta-bentonite with very silty streaks slightly calcareous, trace white, very light green-white, silty, lumpy, bentonite.

6670-80 Shale as above predominte, gray, dark gray, green gray, trace bentonite silty very soft, trace limestone, nodules.

6680-90 Shale as above with increase in buff, very light green-buff, very silty and sandy meta-bentonite shale, trace buff, light green-buff, den limestone argillaceous, trace bentonite as above.

6690-6700 Shale varicolored as above with very silty, calcareous streaks, trace limestone, buff, light gray, very light green-gray, den argillaceous silty, trace siltstone, sandstone, light green-gray very light gray, salt and pepper very fine grained, calcareous argillaceous trace brown hi-pour point oil on sample cavings?

6700-10 Shale varicolored as above with fair trace white light green-white, very light orange, silty, very soft lumpy bentonite.

6710-20 Shale varicolored as above with predominate, gray, green-gray, trace bentonite as above trace limestone, light gray, pink, light orange den tite (nodules), trace siltstone, sandstone, light gray-green, very fine grained, calcareous.

6720-30 Shale light to medium gray, light green-gray, black trace varicolored shale, sub-waxy, scattered meta-bentonite, with silty and calcareous, streaks, bentonite as above good trace siltstone, sandstone, very light gray, slightly salt and pepper very fine to fine grained, sub-angular to sub-rounded, clear, frosted quartz grains, trace black to gray, chert grains, trace glove? Calcareous, firm to friable, with scattered very poor porosity, no fluorescence, no cut with CCl_4.

6730-40	Sandstone, white salt and pepper, very fine to fine grained, angular to sub-rounded, clear, frosted quartz grains, trace black gray chert greens, trace black and green accessory mineral trace brown carbonaceous flecks, trace mica, fairly clear, very calcareous, firm to friable with trace very poor porosity, no show, trace shale as above, trace limestone nodules.
6740-50	Sandstone, siltstone as above with fair trace shale, green, gray green, sub-waxy, slightly silty, and calcareous, trace varicolored shale.
6750-60	Siltstone, sandstone, white, salt and pepper, very fine to fine grained, angular to sub-rounded, clear frosted, quartz grains trace very light gray, black chert grains, trace brown, black green accessory mineral, weak trace mica, very calcareous, fairly clean, firm to friable very poor porosity, no fluorescence no cut with CCl_4, fair gas kick mud analyzer trace interbedded green-gray, fissle sandy shale.
6758	Siltstone, sandstone, as above with fair trace shale, varicolored cavings?
6758-60	Sandstone light gray, white, salt and pepper, fine to medium grained, angular to sub-rounded, clear frosted, very light orange quartz grains trace very light gray, black chert grains, trace black green, brown, accessory mineral, trace mica, calcareous, slightly kaolinitic, fair clean, friable to fine with very poor to fair porosity, no fluorescence, no cut with CCl_4, trace interbedded black, carbonaceous, shale, inclusions.
6760-70	Sandstone as above with fair trace varicolored, shale, no fluorescence or cut with CCl_4, fair gas kick.
6770-78	Shale varicolored, meta-bentonite, sub-waxy, with silty and calcareous streaks trace sandstone as above trace limestone nodules.
6778-80	No returns, trip for ne w bit.
6780-90	Shale, light gray-green, light gray, trace red and tan, yellow sub-waxy, meta bentonite, blocky, firm, with scattered silty and sandy inclusions calcareous trace sandstone as above trace black carbonaceous shale.
6790-6800	Shale, gray to black firm, blocky carbonaceous, fair trace coal, with trace varicolored shale, trace sandstone, white, very light gray, salt and pepper very fine to fine grained, medium grained, very calcareous, with carbonaceous, flecks, trace limestone buff, varicolored den.
6800-10	Shale as above with slightly increase in sandstone, white, very light gray, slightly cream-tan, salt and pepper, fine to medium grained, angular to sub-rounded, clear light green very light orange, frac sorted quartz grains, trace white, light gray black chert grains, trace cream-tan, non cadcareous, matrix trace black, green accessory mineral, kaolinitic with trace calcareous streaks, very firm tite, slightly mineral fluorescence no cut with CCl_4 trace pyrite.

6810-20 Shale varicolored good trace green-gray, gray, black with silty streaks trace sandstone as above becoming green-gray argillaceous.

6820-30 Shale gray, dark gray, green-gray, black, with trace red-purple dark rusty red, yellow, waxy sub-waxy lustre, meta-bentonite, with silty and calcareous streaks trace limestone noddle, trace sandstone, as above with trace black carbonaceous inclusions, no show.

6830-40 Shale as above predominte greens and gray, trace sandstone with buff, very light gray, light green-gray, fine to medium grained angular to rounded, clear frosted, light orange quartz grains trace very light gray, weak chert grains, bentonite kaolinitic matrix, trace light greens soft shaly inclusions, trace light cream-tan, silic streaks, very firm tite, no show, 1 piece very fine grained white, sandstone, light brown oil saturated good fluorescence and cut with CCl_4.

6840-50 Shale as above with considerable dark gray, sub-fissle, to black firm shale, fair trace sandstone white very light gray, buff, green, very fine to medium grained, sub-angular to sub-rounded, clear frosted, very light orange, light green, quartz grains, weak trace light gray, black chert grains, trace light green sfot shaly inclusions, slightly calcareous, kaolinitic, very slightly calcareous, firm tite, no show.

6850-60 Sandstone, white buff, white, fine to coarse grained, sub-angular to rounded, clear, very frosted buff, very light orange quartz grains, trace very light gray white, black chert grains, trace soft light green, shaly inclusions, kaolinitic, friable tite no apparen porosity, no fluorescence, no cut with CCl_4, slightly gas kick from mud trace gray, green-gray, shale.

6860-70 Sandstone as above with trace very coarse very light orange, clear frosted quartz grains mud trace gray, green-gray shale.

6870-80 Sandstone as above with trace very coarse very light orange, clear frosted well rounded quartz grains, trace gray-green, gray, black red, shale, Ran Induction-Electric-Sonic Log-Electric Log.

6880-90 Shale light green, very light gray-green, buff-gray, buff, yellow, brite orange, red-orange, dark gray, black waxy to sub-waxy lustre, meta-bentonite with scattered very silty inclusions scattered calcareous streaks, trace sandstone, very light gray, trace green-gray, salt and pepper, very fine to fine grained, medium grained, angular to sub-rounded, clear frosted very light orange, quartz grains, trace very light gray chert green, trace green-black, green accessory mineral, kaolinitic slightly calcareous, firm to friable no porosity no show, trace black carbonaceous inclusions.

6890-6900 Shale as above predominate, gray, green-gray, weak trace sandstone as above to argillaceous coal.

7000-10 Shale varicolored as above with fair trace black carbonaceous shale trace coal trace siltstone sandstone as above.

7010-20 Sandstone, white very light gray, salt and pepper, firm, very fine to fine grained, very calcareous, kaolinitic firm to friable with trace very poor porosity no show, trace shale as above.

7020-30 Sandstone, white very light gray, salt and pepper, fine to medium grained, angular to sub-rounded, clear, frosted, very light orange, very light green, quartz grains trace black very light gray, white red chert grains, weak trace black and accessory mineral trace carbonaceous flecks, with trace mica, slightly calcareous, kaolinitic, firm to friable, with weak trace very poor porosity, no fluorescence no show trace varicolored shale.

7030-40 Sandstone as above, trace yellow, red-purple, buff gray, sub-waxy shale.

7040-50 Sandstone, white very light gray, salt and pepper, fine to medium grained, angular to sub-rounded as above, no show, fair trace gray to black, sub-fissle to blocky trace sub-waxy, shale trace coal trace red-purple, red-orange, orange, buff, buff, tan, yellow shale.

7050-60 Shale, varicolored,predominate, grays and greens, weak trace sandstone as above trace limestone buff, light gray den, weak trace coal.

7060-70 Shale as above predominate, grays and greens, fair trace sandstone as above trace siltstone light green-gray, very argillaceous, calcareous firm.

7070-80 Sandstone, white, light gray, salt and pepper, fine to medium grained, angular to sub-rounded, clear, frosted, very light orange, amber, quartz grains, trace white, very light gray occasional red, black chert grains, trace black to green accessory mineral occasional piece mica, kaolinitic very slightly calcareous, friable to firm, with trace very poor porosity, no fluorescence, no show moderate trace green-gray, red shale.

7080-90 Sandstone as above no show with fair trace shale trace black carbonaceous shale.

7090-7100 Interbedded, shale and sandstone as above 60% shale 40% Sandstone

7100-10 Shale bright orange, orange-buff, yellow, buff-yellow, buff, very light gray, red-purple, meta-bentonite, very silty sub-waxy waxy lustre, very slightly calcareous slight trace sandstone and shale as above.

7110-20 Shale as above with occasional sandy inclusions.

7120-30 Shale as above becoming more green-gray, with silty streaks trace floating sand grains, trace sandstone, siltstone.

7130-40 Shale, light gray, gray dark gray, black, light green, red-purple, yellow, buff orange, sub-waxy lustre, meta-bentonite silty slightly calcareous.

7140-50q Shale as above, trace varicolored den limestone trace coal very slight trace sandstone.

7150-60 Shale as above predominate, gray, green-gray, trace sandstone light gray, salt and pepper, very fine grained, calcareous, den tite, trace carbonaceous inclusions, no show.

7160-70 Shale, light to dark gray, black, gray-red, green-gray, red-purple, red-brown, yellow, sub-waxy lustre with meta-bentonite streaks, blocky to sub-fissle, trace very carbonaceous streaks scattered very silty streaks, trace varicolored limestone nodules poor fair trace sandstone, white, very light gray, salt and pepper, fine to medium grained, angular to sub-rounded, clear frosted trace very light orange, quartz grains and very light to dark gray chert grains, trace black and green accessory mineral, calcareous, kaolinitic firm tite, no cut with CCl_4, very weak trace coal.

7170-80 Shale varicolored, red, grays, greens, meta-benotnite, sub-waxy lustre, with very silty streaks, trace limestone nodules.

7180-90 Shale as above with increase in siltstone, light gray, green, gray, calcareous, argillaceous with trace coal flecks, trace sandstone white, medium grained, very kaolinitic.

7190-7200 Shale as above with moderate trace sandstone white light gray light green, white, salt and pepper, very fine to fine grained, calcareous kaolinitic with carbonaceous flecks, firm tite, scattered occasional piece coal.

7200-10 Shale as above with considerable red-purple, fair trace sand-staone siltstone as above with carbonaceous inclusions, trace liquid coal.

7210-20 Shale varicolored with good and amount gray, green-gray, shale, with silty inclusions trace limestone nodules trace lig. coal.

7220-30 Shale varicolored with good amount gray, green-gray, shale, with silty inclusions trace limestone nodules trace sandstone white, very light gray, salt and pepper, very fine grained, calcareous, den tite.

7230-40 Shale varicolored as above with very good trace silty inclusions trace sandstone.

7240-50 Shale asabove with moderate trace sandstone white slightly salt and pepper, very fine grained, slightly calcareous, firm, tite trace carbonaceous flecks trace coal.

7250-60 Shale as above.

7260-70 Shale as above with increase in dark gray to black carbonaceous sub-fissle, slightly waxy shale, trace siltstone light gray, slightly salt and pepper, calcareous slightly micaceous with thin coal partings and inclusions.

7270-80 Shale as above with fair trace siltstone as above no show.

7270-80	Shale as above with fair trace siltstone as above no show.
7280-90	Shale varicolored as above with trace gypsum white micro crystalline, fair trace siltstone, sandstone white, very light gray, very fine to fine grained, calcareous, slightly argillaceous trace black carbonaceous flecks, kaolinitic firm, no porosity no show, trace coal.
7290-7300	Shale, varicolored as above with considerable silty streaks, trace sandstone, white medium grained, slightly calcareous, kaolinitic tite, fair to varicolored limestone nodules.
7300-10	Shale as above predominate red-purple, red-orange, brown-red, waxy, meta-benotnite red-purple, red, with silty and calcareous streaks, weak trace gypsum.
7310-20	Shale varicolored, predominate, gray, dark gray, black, sub-fissle, sub-waxy, very slightly calcareous with very carbonaceous streaks, trace very shaly coal, trace siltstone, sandstone white, light gray, light green-gray, slightly salt and pepper, very fine to fine grained, calcareous kaolinitic, argillaceous with very shale streaks trace limestone, nodules.
7320-30	Shale as above with good trace black, carbonaceous shale and trace shaly coal, trace sandstone white light gray, salt and pepper, very fine grained, to fine grained, calcareous firm, tite.
7330-40	Shale, gray, dark gray, trace black, with trace varicolored shale, sub-fissle to blocky, sub-waxy with calcareous carbonaceous streaks trace coal, shale goal, good trace sandstone, white, very light gray, slightly salt and pepper, trace very fine, predominate, fine to medium grained, angular sub-rounded, clear frosted very light orange quartz grains, trace white, light gray, black chert grains, trace black and green accessory mineral, weak trace mica, very slight calcareous, kaolinitic firm, tite, with very scattered trace very poor porosity, weak trace black coaly inclusions, very slightly fluorecence no cut with CCl_4, fair gas kick from mud, none from sample.
7340-50	Sandstone as above with interbedded thin dark gray gray, black trace red, shale, stringers, no show in samples, 200 to 500 unit methane kick on gas analysis from mud, no gas in samples.
7350-60	Shale red, gray, black, red-purple, orange, very firm, blocky meta-benotnite, slightly silty scattered, sub-waxy lustre weak trace coal trace sandstone as above.
7360-70	Shale as above with fair trace interbedded light gray, green-gray, argillaceous calcareous siltstone trace coal, weak trace sandstone, white light gray fine to medium grained, slightly calcareous kaolinitic.
7370-80	Shale, gray, gray-green, black, red-purple, red-brown,yellow-brown, very firm, sub-waxy lustre, meta-bentonite scattered very slity inclusions, trace coal, trace sandstone as above.

7380-90	Shale varicolored with trace sandstone, white light gray salt and pepper, fine to medium grained, slightly calcareous, kaolinitic slightly micaceous firm, tite.
7390-7400	Shale gray, dark gray, black trace red-purple, sub-fissle, firm, non-calcareous, slightly carbonaceous moderate trace coal, weak trace sandstone, shale becoming increasing oily, white, salt and pepper fine grained, slightly calcareous kaolinitic.
7400-10	Shale as above with fair trace coal, trace varicolored shale, weak trace siltstone and sandstone.
7410-20	Shale as above trace coal increase in siltstone sandstone.
7420-30	Shale as above trace coal, friable trace siltstone sandstone white very light gray, salt and pepper, very fine to fine grained, slightly calcareous, kaolinitic with scattered very poor porosity, trace carbonaceous inclusions no show.
7430-40	Interbedded shale as above and sandstone as above (50-50) trace coal, trace limestone nodules.
7440-50	Shale, light to dark gray, trace black, weak trace varicolored shale, sub-fissle to blocky, meta-bentonite, to carbonaceous, firm, with scattered sily inclusions, trace lignitic coal, trace siltstone and sandstone as above, light gray, slightly micaceous, limy firm tite.
7450-60	Shale as above with increase in black lignitic shale, very weak trace sandstone as above, light gray slightly micaceous, limy.
7460-70	Shale as above with slight increase in varicolored shale trace siltstone and sandstone.
7470-80	Shale as above with increase in varicolored shale trace coal, weak trace siltstone and sandstone.
7480-90	Shale as above with varicolored shale very weak trace coal weak trace siltstone and sandstone.
7490-7500	Shale as above with varicolored shale trace coal weak trace siltstone and sandstone.
7500-10	Shale as above with varicolored shale trace coal trace siltstone and sandstone weak trace den, buff limestone.
7510-20	Shale as above with varicolored shale, trace sandstone, white, light gray, salt and pepper, fine to medium grained, angular to sub-rounded, clear frosted light green, very light orange, quartz grains trace light gray, white, black chert grains trace mica, kaolinitic slightly calcareous no porosity, no cut with CCl_4, weak trace coal.
7520-30	Shale, varicolored, with considerable gray, dark gray, green-gray, black, sub-waxy, meta-bentonite and carbonaceous, shale, very weak trace coal, weak trace siltstone, sandstone.
7530-40	Shale predominate, gray, green-gray, trace black, firm, sub-fissle, sub-waxy, meta-bentonite, carbonaceous trace varicolored shale, with trace siltstone sandstone, white light gray, salt and pepper, fine grained, trace green, black accessory mineral slightly calcareous, kaolinitic, trace coal
7540-46	**Shale as above with trace sandstone.**

7546-50	Missing Trip.
7550-60	Shale, light to dark gray, gray-green, black with trace varicolored shale, sub-fissle to blocky, meta-bentonite to carbonaceous with scattered silty inclusions, trace sandstone white, very light gray, very fine to fine grained, calcareous kaolinitic, firm, tite, trace coal.
7560-70	Shale, gray dark gray, black sub-fissle, very carbonaceous with fair trace interbedded coal and lignitic streaks white trace purple-red shale, weak trace stiltstone, sandstone white, light gray.
7570-80	Shale, light gray light gray-green, dark gray, dark green, black, red-purple, red-brown, sub-waxy lustre, meta-bentonite with scattered silty and calcareous streaks, trace sandstone white, very light gray, salt and pepper, fine to medium grained angular to sub-angular, clear frosted, very light orange quartz grains with trace black, light gray chert grains, trace black and green accessory mineral, trace mica, slightly calcareous, slightly kaolinitic firm to friable with scattered trace very poor porosity, no fluorescence, no cut with CCl_4, trace gypsum (cavings)?
7580-90	Shale dark gray, blocky sub-fissle, carbonaceous with lignitic and coal seams, trace shale as above very weak trace coal.
7590-7600	Shale as above with trace varicolored shale, weak trace coal, trace sandstone, white, light gray, salt and pepper, very fine grained, calcareous, with carbonaceous flecks.
7600-10	Shale as above with silty and sandy inclusions.
7610-20	Shale as above with very silty and sandy inclusions, trace coal.
7620-30	Sandstone, white, very light gray, salt and pepper, very fine to medium grained, angular to sub-rounded, clear frosted quartz grains with trace white, light gray to black chert grains, trace mica, weak trace green and black accessory mineral, very slightly calcareous, kaolinitic, firm tite to friable with scattered very poor porosity, very weak yellow-buff mineral fluorescence no cut with CCl_4, trace gray shale, trace coal.
7630-40	Sandstone as above with good trace shale, gray, dark gray, black, trace maroon, sub-fissle, firm very carbonaceous, trace coal.
7640-50	Sandstone, as above with moderate shale, gray, dark gray, black trace maroon, sub-fissle, firm very carbonaceous trace coal, no fluorescence very questionable weak cut with CCl_4.
7650-60	Sandstone as above with considerable shale, black dark gray, gray maroon, with scattered very carbonaceous streaks trace coal.
7660-70	Interbedded shale and sandstone as above with good trace green shale.
7670-80	No samples, trip.

7680-90 Shale as above with trace sandstone and sand, considerable cavings and lost circulation, material (losing mud).

7690-7700 Shale, black, dark gray, sub-fissle, to blocky firm very carbonaceous with very thin seam coal, frace interbedded siltstone and sandstone very fine grained, slightly calcareous, with trace coal flecks.

7700-10 Shale as above with increase in siltstone and sandstone, no fluorescence no cut with CCl_4.

7710-20 Shale as above with weak trace siltstone and sandstone trace coal.

7720-30 Shale as above with trace maroon and green-gray, shale, trace siltstone and sandstone.

7730-40 Shale as above with good trace sandstone white, salt and pepper, fine to medium grained, angular to sub-rounded, clear frosted, light orange quartz grains, with trace white, very light gray, black chert grains, trace black and green accessory mineral weak trace mica trace light green clayey inclusions calcareous slightly kaolinitic, firm to friable with very scattered very poor porosity, trace yellow-buff mineral fluorescence no cut with CCl_4.

7740-50 Shale black, very dark gray, fissle to blocky, very carbonaceous with occasional coal seam, fair trace sandstone as above with coal flecks.

7750-60 Shale as above with fair trace sandstone, fair trace varicolored shale cavings?

7760-70 Same as above with considerable varicolored shale and less sandstone.

7770-80 Same as above.

7780-90 Shale light to dark gray, black, green-gray, trace varicolored shale, (cavings due to lost circulation) fair trace sandstone, white, very light gray, salt and pepper, fine to medium fine grained, angular to sub-angular, clear frosted quartz grains trace mica fair trace coal and lignitic inclusions, slightly calcareous slightly kaolinitic, firm tite with scattered occasional piece with poor porosity, very dull buff-yellow mineral fluorescence no cut with CCl_4.

7790-7800 Shale as above with considerable varicolored shale with very silty and sandy inclusions trace sandstone as above (losing circulation considerable cavings).

7800-10 Shale, dark gray, very dark gray-brown, black, sub-fissle to blocky lignitic and carbonaceous, trace very fine grained calcareous shale and pepper, white sandstone considerable varicolored shale cavings.

7810-20 Sandstone, white, very light gray, very light brown salt and pepper, very fine to medium grained angular to sub-angular, rounded, clear frosted, occasional very light orange quartz green with trace white buff, light gray chert grains, trace mica trac green, shaly inclusions scattered lignitic inclusions slightly calcareous kaolinitic firm, tite with scattered very poor porosity, weak trace yellow speckled mineral fluorescence no cut with CC14, good gas kick from mud, fair trace shale with considerable cavings.

7820-30	Sandstone as above 60% with interbedded dark gray to black carbonaceous shale, trace lignitic and coal, trace shale varicolored, good gas kick (2500-3800 units methane from mud, no gas from cuttings).
7830-40	Sandstone as above 70%, with interbedded, very dark gray black, carbonaceous shale, trace coal lignitic, no show except from mud, drilling mud frothy.
7840-50	Sandstone as above with trace specked yellow mineral fluorescence no cut with CCl_4, (60% sandstone), 40% shale, very dark gray, black, carbonaceous with waffer thin coal seams, trace coal (up to 4200 unit methane).
7850-60	Shale, very dark gray, dark green-gray, black brown-black, firm, blocky, carbonaceous, with lignitic and coaly streaks, trace sandstone as above.
7860-70	Intefbedded shale and sandstone as above with trace siltstone, weak trace coal, considerable cavings.
7870-80	Interbedded shale and sandstone as above no cut with CCl_4 fair gas kick 2600 units methane.
7880-90	Sandstone, white, very light gray, salt and pepper fine to medium grained angular to sub-rounded, clear frosted quartz grains with trace very light gray, black chert grains, trace mica with scattered lignitic and coal inclusions trace black and green accessory mineral slightly calcareous, slightly kaolinitic, firm to friable with scattered poor porosity, with dull buff to yellow-brown, fluorescence no cut with CCl_4, up to 4000 units methane in mud fair trace shale, black, brown-black, very dark gray, firm blocky, carbonaceous to very lignitic trace cavings.
7890-7900	Sandstone, white, very light gray, slightly brown-gray, salt and pepper, fine to medium fine grained, and angular to sub-rounded, clear frosted, light orange quartz grains with trace bla red, gray, chert grains, trace mica trace green shaly inclusions fair trace carbonaceous inclusions, slightly to fair calcareous slightly kaolinitic, clean, friable with fair porosity, no cut with CCl_4.
7900-10	Trace black carbonaceous shale, sandstone as above with interbedded black, very carbonaceous shale trace coal streaks, with plant fragments scattered yellow, yellow-buff mineral fluorescence no cut with CCl_4, good gas kick from mud.
7910-20	Interbedded sandstone, white, very light gray, very light brown-white, salt and pepper, very fine to medium fine grained, as above and shale black, dark brown-black gray, 60 to 70% sand-stone, scattered yellow, yellow-brown fluorescence no cut with CCl_4 900 to 2200 unit methane.
7920-30	Sand, sandstone as above becoming very friable with fair porosity trace lignitic streaks, weak trace carbonaceous black shale.

7930-40	Sand, sandstone white very very light gray, salt and pepper, fine to medium fine grained, angular to sub-rounded, clear frosted, very light orange quartz grains with trace white very light gray dark gray chert grains very weak trace mica trace very light green shaly inclusions trace lignitic inclusions slightly calcareous, slightly kaolinitic firm to friable, with scattered very poor to fair porosity, scattered yellow-brown fluorescence no cut with CCl_4, trace black, brown-black, carbonaceous shale trace lignitic.
7940-50	Sand, sandstone, with interbedded black carbonaceous shale fair trace cavings.
7950-60	Sand, sandstone as above with interbedded black, brown black very carbonaceous shale trace shale cavings.
7960-70	Interbedded sandstone and shale as above 60 to 70% sandstone, sand, 30 to 40% shale trace varigated shale cavings.
7970-80	Interbedded sandstone and shale as above with increase in shale.
7980-90	Sandstone, very light gray, salt and pepper, very fine to fine grains, angular to sub-rounded, clear frosted quartz grains with trace black, gray chert grains, trace gray and black accessory mineral, trace mica, trace scattered black very dark brown carbonaceous flecks, calcareous, slightly argillaceous carbonaceous flecks, calcareous, slightly argillaceous firm tite, no porosity slightly yellow mineral fluorescence no cut with CCl_4, moderate trace interbedded, black, brown-black, firm carbonaceous shale, trace waffer thin lignitic and coal inclusions, trace pink cement with chert fragments cavings or from guide and shoe.
7990-8000	Interbedded sandstone and shale as above trace calcareous filled veins, trace gray-brown, gray, trace den limestone, argillaceous den tite.
8000-10	Sandstone, as above becoming medium grained and with more shale dark black-brown, black, blocky firm, very carbonaceous with lignitic and coaly inclusions, no show, fair trace pink, cement with chert cavings.
8010-20	Shale as above with fair trace sandstone as above considerable pink cement with chert fragments, probable from shoe.
8020-30	Interbedded sandstone and shale as above with very carbonaceous trace chert and cement as above.
8030-40	Sandstone, white, very light gray very light gray-brown, salt and pepper, very fine to fine grained with medium grained streaks, angular to sub-rounded, clear frosted quartz grains with gray to black chert, trace green and black accessory mineral very slightly micaceous, considerable lignitic and carbonaceous streaks slightly calcareous, slightly argillaceous, firm tite, no show, slightly trace gas in mud, trace soft, lumpy, bentonite, brown gray shale.
8040-50	Sandstone as above with trace interbedded, very dark gray, black brown-black, no fluorescnec or cut with CC14 slightly gas kick.

8050-60	Sandstone, very light gray, very light gray-brown slightly salt and pepper, fine to medium grained, sub-angular to sub-rounded clear, frosted quartz grains with trace black chert grains, fair trace carbonaceous and lignitic streaks and inclusions, very slightly calcareous, slightly kaolinitic hard tite no show, slightly gas kick trace shale as above.
8060-70	Sandstone, very light gray, very light brown-gray, salt and pepper, fine to medium fine grained, sub-angular to sub-rounded clear frosted quartz grains with trace black and gray chert grains, fair sorting with trace black and green accessory mineral weak trace mica, slightly calcareous and lignitic streaks very firm den tite, no porosity slight gas kick in mud, trace interbedded very light gray-brown, very soft bentonite, slightly carbonaceous shale.
8070-80	Sandstone as above with scattered trace medium grains, with trace black brown-black, lignitic, shale inclusions, slightly gas kick in mud,
8080-90	Sandstone as above with very scattered trace very poor porosity gas blow out at 8104 with 9.2# mud.
8085-8104	No returns gas blow out samples which were caught after gas flow was killed were those which were gunned off the bottom of the pit.
8104-10	Cavings, trace sandstone very light gray, salt and pepper, fine grained, angular, clear frosted, quartz grains, trace black chert grains, trace black carbonaceous inclusions, trace mica, firm tite trace black, dark gray, carbonaceous shale.
8110-15	Cavings as above with trace sandstone and shale.
8115-20	Missing sample.
8120-30	Sandstone, light gray very light brown-gray, salt and pepper, very fine to fine grained, with occasional medium grained streak, angular to sub-angular, clear, sub-frosted quartz grains, poorly sorted weak trace black dark gray, chert grains poorly sorted trace black, brown-black carbonaceous inclusions trace mica slightly calcareous, slightly argillaceous montmorillonite? trace interbedded black carbonaceous to very coaly shale, no cut or fluorescence.
8130-40	Sandstone and shale as above with considerable cavings, (picked up form mud tanks because of 13.5# mud) no cut or fluorescence.
8140-50	Sandstone, light gray, very light brown-gray, slightly salt and pepper, very fine to fine grained with occaaional medium grained, angular to sub-rounded clear, trace frosted, quartz grains trace black and gray chert grains, trace black carbonaceous inclusions, slightly calcareous with trace chyey material in intersticies sub-qtzitic, very firm, tite very fair trace interbedded, black very carbonaceous shale weak trace coal considerable cavings.

8150-55 Sandstone as above becoming very limy den very firm slightly buff-yellow flurorescence no cut with CCl_4.

8155-60 Sandstone as above with considerable interbedded, black brown blac, carbonaceous firm shale, considerable eavings.

8160-65 Sandstone, white very light gray, very light tan-gray slightly salt and pepper, fine grained with occasional scattered, very fine and medium grained streaks angular to sub-rounded, clear frosted quartz grains with scattered black, light gray chert fair to very poorly sorted, scattered black carbonaceous inclusions and lignitic streaks, trace micro-mica, slightly calcareous with scattered clayey streaks, silty sheen in part, qtzitic, tite, no fluorescence to very light gray mineral fluorescence no cut with CCl_4, trace interbedded, black lignitic firm, shale.

8165-70 Shale black, very dark gray, firm, carbonaceous to coaly with good trace sandstone as above.

8170-75 No samples.

8175-80 Sandstone, as above no fluorescence no cut with CCl_4, trace interbedded, black carbonaceous shale.

8180-85 Sandstone as above with trace light gray-green sandstone and light gray-green, firm, blocky shale.

8185-90 Sandstone as above with scattered trace light buff-yellow, fluorescence, very weak slow cut with ccl_4.

8190-95 Sandstone as above very weak show as above trace interbedded very light gray-brown very soft bentonite silty shale.

8195-8200 Sandstone as above with very weak very slow slightly cut with CCl_4 trace interbedded gray, very soft, bentonite silty shale, with moderate trace black, blocky, firm, carbonaceous, shale with coaly streaks considerable cavings pick up by heavy mud.

8200-05 Sandstone as above with weak slow cut in CCl_4, after application of CCl_4 trace black firm, carbonaceous shale.

8205-10 Sandstone as above with fair trace shale, black, firm, very carbonaceous to coaly, with sandy streaks, fair trace cavings.

8210-15 Interbedded sandstone and shale as above (60% shale 40% sandstone) trace pyrite.

8215-20 Sandstone very light gray, very light brown-gray, very fine to fine grained, angular to sub-rounded clear frosted quartz with occasional trace black, gray chert grains, fair trace black carbonaceous and lignitic inclusions, slightly calcareous, sub-qtzitic, with trace interbedded black, lignitic to carbonaceous shale, trace weak buff-yellow fluorescence very slow weak cut with CCl_4.

8220-25 Sandstone as above with trace black, carbonaceous to coaly, firm shale.

8225-30 Sandstone as above with fair trace black, very carbonaceous to coaly, firm, shale, trace light brown, light gray-brown, soft bentonite shale.

8230-35 Sandstone as above with trace black carbonaceous to coaly firm, shale, (80% sandstone).

8235-40 Sandstone as above with trace black, carbonaceous to coaly firm shale (70% sandstone).

8240-50 Sandstone as above trace black very carbonaceous to coaly firm shale, (90% sandstone).

8245-50 No samples trip.

8250-60 Sandstone light gray, very light brown-gray, slightly salt and pepper, very fine to fine grained, angular to sub-rounded, quartz grains trace gray to black chert grains, slightly calcareous, trace carbonaceous inclusions and lignitic interbedded streaks, sub-qtzitic, no cut with CCl_4, no fluorescence trace interbedded black carbonaceous firm, shale.

8255-60 Sandstone and shale as abovewith considerable cavings.

8260-65 Sandstone and shale as above with considerable cavings.

8265-70 Sandstone and shale as above with considerable cavings very poor sample.

T. D. 8269.5 Driller
8267 S J

Schlumberger side wall cores.

8150 No recovery

8147 No recovery

8143 Sandstone very light gray, light tan gray, very fine to fine grained, angular to sub-rounded clear frosted, quartz grains with trace black to very light gray chert grains, trace interbedded coal and lignitic streaks, friable to very firm, with trace clayey matrix slightly calcareous, trace very poor porosity, slightly petro odor fair cut with CCl_4, scattered yellow-green fluorescence.

8105 Sandstone light gray, very light brown-gray, very fine to fine grained, angular to sub-rounded, clear frosted quartz grains with trace black to gray chert grains, weak trace interbedded, lignitic, inclusions, firm with friable streaks, slightly clayey matrix slightly calcareous, very weak trace very poor porosity, slightly yellow-green fluorescence, weak chert with CCl_4, slightly petro odor.

8095 No recovery.

8087 Sandstone, very light gray, very light brown-gray white, slightly salt and pepper, very fine to fine grained, with scattered medium grained, angular to sub-rounded, clear frosted, quartz grains with trace black and light gray chert greens trace green accessory mineral, good trace interbedded, lignitic to very coaly waffer thin laminations, scattered light brown, oil stain?, friable to firm with scattered poor porosity, slightly petro odor, no fluorescence buf fair cut with CCl_4.

8079 Siltstone sandstone light gray, very fine grained quartz grains slightly argillaceous slightly calcareous firm to friable, tite very poor sample.

SEP 2 ? 1982

GAS PRODUCING ENTERPRISES, INC.
A Subsidiary of Coastal States Gas Producing Company
Phone (801) 789-4433
Vernal, Utah 84078

Mailing Address
P. O. Box 628

January 21, 1972

State of Utah, Department of Natural Resources
Division of Oil & Gas Conservation
1588 North Temple Street
Salt Lake City, Utah 84116

Attention: Cleon B. Feight

Dear Sir:

Please be advised that Gas Producing Enterprises, Inc. has purchased from Tenneco Oil Company, effective on December 8, 1971, the following wells:

Nat. Buttes Unit-U-01191A, Sec. 5 NE¼ NE¼ T-10S R-22E - #1

Ute Trail Unit	-U-01196C,	Sec. 8	NE¼	NE¼	T-10S R-22E	- #1
"	U-3276,	Sec.16	NE¼	NE¼	T-10S R-22E	- #3
"	U-01194A,	Sec.34	NE¼	SW¼	T- 9S R-21E	- #10
"	Utah 0581,	Sec.29	NE¼	SW¼	T- 9S R-21E	- #12
"	U-010950A,	Sec.15	SE¼	NW¼	T- 9S R-21E	- #13
"	U-01191,	Sec. 4	NE¼	NE¼	T-10S R-22E	- #7
"		Sec.22			T- 9S R-20E	- #52X
"	U-01196,	Sec. 9	SW¼	NE¼	T-10S R-22E	- #83X
"		Sec. 2			T-10S R-21E	- #81X

Uintah Unit U-10755, Sec.16 SE¼ NE¼ T-10S R-22E - #1

Bitter Creek Un.-U-037166, Sec.34 SE¼ NW¼ T-10S R-22E - #1

Yours very truly,

J. R. Curtsinger, Division Manager

JRC/ev

DWL-451-2-A

DOWELL DIVISION OF THE DOW CHEMICAL COMPANY

LABORATORY LOCATION: Casper

API WATER ANALYSIS REPORT FORM

DATE: Apr. 27, 1977

LAB NO. CL 6482

Company		Sample No.	Date Sampled
Gas Producers		41545	
Field	**Legal Description**	**County or Parish**	**State**
Ute Tribal		Uintah	Utah
Lease or Unit	**Well**	**Depth**	**Formation**	**Water, B/D**
	#1	6000	Wasatch	
Type of Water (Produced, Supply, etc.)	**Sampling Point**	**Sampled By**
Produced		

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	2727	120.0
Calcium, Ca	34	1.7
Magnesium, Mg	6	0.5
Barium, Ba		

ANIONS		
Chloride, Cl	3300	92.4
Sulfate, SO_4	210	4.2
Carbonate, CO_3	92	3.0
Bicarbonate, HCO_3	1410	22.6

Total Dissolved Solids (calc.)

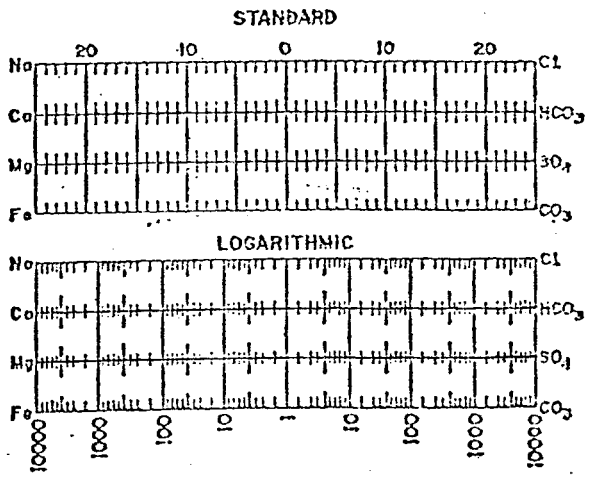
Iron, Fe (total): 3

Sulfide, as H_2S

OTHER PROPERTIES

pH	7.85
Specific Gravity, 60/60 F.	1.000
Resistivity (ohm-meters) ____ F.	

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS:

... IN RECOMMENDED PROCEDURE

FORM CIG 4896-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
560-01-11	NATURAL BUTTES, UT	2915	COASTAL OIL & GAS CORPORATION	UTE TRAIL (M) 1

WELL CODE (3—7)	SECT.	LOCATION TWNSHP/BLK	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	PANHANDLE/REDCAVE K-FACTOR	FORMATION	
4400	8	10S	22E			MESAVERDE	FLOW TEST

WELL ON (OPEN) MO. (11-12)	WELL ON (OPEN) DAY (13-14)	WELL ON (OPEN) YR. (15-16)	DATE (COMP.) MO. (17-18)	DATE (COMP.) DAY (19-20)	DATE (COMP.) YR. (21-22)	ORIFICE SIZE (23—27)	METER RUN SIZE (28—32)	COEFFICIENT (33—38)	GRAVITY (SEP.) (39—42)	METER DIFF. RANGE (43—48)	METER PRESSURE (46—51)	DIFFERENTIAL ROOTS (52—55)	METER TEMP. (56—58)	WELL HEAD TEMP. (59—61)	FLOWING TBG/CSG PRESSURE (62—67)	STATIC TBG/CSG PRESSURE (68—73)	FLOWING STRING TUBING (74)	FLOWING STRING CASING (75)
XX	XX	XX	XX	XX	XX	XXX	XXX	XXXXX	X	XXX	XXXXX	XX	XXX	XXX	XXXXXX	XXXXXX	X	X
							2.067			100								

WELL OFF (SHUT-IN) MO. (11-12)	WELL OFF (SHUT-IN) DAY (13-14)	WELL OFF (SHUT-IN) YR. (15-16)	SHUT-IN TEST PRESSURE TAKEN MO. (17-18)	SHUT-IN TEST PRESSURE TAKEN DAY (19-20)	SHUT-IN TEST DATE YR. (21-22)	CASING PRESSURE (PSIG) (23—28)	TUBING PRESSURE (PSIG) (29—34)	SLOPE (35—38)	EFFECTIVE DIAMETER (39—44)	EFFECTIVE LENGTH (45—49)	GRAVITY (RAW GAS) (50—53)	EST CSG PRESS (54)	EST TBG PRESS (55)
XX	XX	XX	XX	XX	XX	XXXXX	XXXXX	XXX	XXXXX	XXXXX	XXX	E	E
								.579	2.4410	7357			

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H.K Nash

OPERATOR:

COMMISSION:

METER STAMP

REMARKS: T.D'd Same as U.T. # 1 (W)

FORM CIG 4896-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
080-01-11	NATURAL BUTTES, UT	2915	COASTAL OIL & GAS CORPORATION	UTE TRAIL (W) 1

WELL CODE 3——7	SECT.	LOCATION TWNSHP/BLK	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	PANHANDLE/REDCAVE K-FACTOR	FORMATION
4401	8	10S	22E			WASATCH SA FLOW TEST

WELL ON (OPEN) MO.	WELL ON (OPEN) DAY	WELL ON (OPEN) YR.	DATE (COMP.) MO.	DATE (COMP.) DAY	DATE (COMP.) YR.	ORIFICE SIZE	METER RUN SIZE	COEFFICIENT	GRAVITY (SEP.)	METER DIFF RANGE	METER PRESSURE	DIFFERENTIAL ROOTS	METER TEMP.	WELL HEAD TEMP.	FLOWING TBG/CSG PRESSURE	STATIC TBG/CSG PRESSURE	FLOWING STRING TUBING	FLOWING STRING CASING
11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 ——— 27	28 ——— 32	33 ——— 38	39 —— 42	43 —— 45	46 ——— 51	52 ——— 55	56 —— 59	59 — 61	62 ——— 67	68 ——— 73	74	75
XX	XX	XX	XX	XX	XX	XX XXX	XX XXX	XXXXX X	X XXX	XXX	XXXXX X	XX XX	XXX	XXX	XXXXX X	XXXXX X	X	X
06	15	83	06	28	83	00 500	4 .067	01219	0 0	602	100	00502	0	088	00565	0 ———	X	

WELL-OFF (SHUT-IN) MO.	WELL-OFF (SHUT-IN) DAY	WELL-OFF (SHUT-IN) YR.	SHUT-IN TEST PRESSURE TAKEN MO.	PRESSURE TAKEN DAY	DATE YR.	CASING PRESSURE (PSIG)	TUBING PRESSURE (PSIG)	SLOPE	EFFECTIVE DIAMETER	EFFECTIVE LENGTH	GRAVITY (RAW GAS)	EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23 ——— 28	29 ——— 34	35 ——— 38	39 ——— 44	45 ——— 49	50 —— 53	54	55
XX	XX	XX	XX	XX	XX	XXXXX X	XXXXX X	X XXX	XX XXXX	XXXXX	X XXX	E	E
06	25	83	06	28	83			624	3 4509	6209			

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: L. K. Wyatt

OPERATOR: BD Schatz

COMMISSION:

METER STAMP: 94401 00500

REMARKS: Casing plugged.

FORM CIG 4896-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
[illegible]-01-11	NATURAL BUTTES, UT	2915	COASTAL OIL & GAS CORPORATION	UTE TRAIL (M)

WELL CODE 3—7	SECT.	LOCATION TWNSHP/BLK	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	K-FACTOR	FORMATION		
94400	[illegible]	1 S	22E			MESAVERDE	FLOW TEST	1

FLOW TEST

WELL ON (OPEN) MO.	DAY	YR.	DATE (COMP.) MO.	DAY	YR.	ORIFICE SIZE	METER RUN SIZE	COEFFICIENT	GRAVITY (SEP.)	METER DIFF. RANGE	METER PRESSURE	DIFFERENTIAL ROOTS	METER TEMP.	WELL HEAD TEMP.	FLOWING TBG/CSG PRESSURE	STATIC TSG/CSG PRESSURE	FLOWING STRING TUBING	CASING
11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 — 27	28 — 32	33 — 38	39 — 42	43 — 45	46 — 51	52 — 55	56 — 58	59 — 61	62 — 67	68 — 73	74	75
X X	X X	X X	X X	X X	X X	X X X X X	X X X X X	X X X X X X	X X X X	X X X	X X X X X X	X X X X	X X X	X X X	X X X X X X	X X X X X X	X	X
							2 067			100								

SHUT-IN TEST

WELL-OFF (SHUT-IN) MO.	DAY	YR.	PRESSURE TAKEN MO.	DAY	DATE YR.	CASING PRESSURE (PSIG)	TUBING PRESSURE (PSIG)	SLOPE	EFFECTIVE DIAMETER	EFFECTIVE LENGTH	GRAVITY (RAW GAS)	EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23 — 28	29 — 34	35 — 38	39 — 44	45 — 49	50 — 53	54	55
X X	X X	X X	X X	X X	X X	X X X X X X	X X X X X X	X X X X	X X X X X X	X X X X X	X X X X	E	E
								577	2 441[illegible]	7357			

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H. K. Mark

OPERATOR: C. G. Johnson

COMMISSION:

REMARKS: Combined with Wasatch SA zone

FORM CIG 4896-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
[illegible]-01-[illegible]	[illegible]TURAL BUTTE[illegible], UT	[illegible]	[illegible]ASTAL OIL & GA[illegible] CORPORATIO[illegible]	UTE TRAIL ([illegible])

CODE 7	SECT.	LOCATION TWNSHP/BLK	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	K-FACTOR	FORMATION		
[illegible]4401		1[illegible]	[illegible]2[illegible]			[illegible]ASATCH [illegible]A	FLOW TEST	1

FLOW TEST

WELL ON (OPEN) MO.	DAY	YR.	DATE (COMP.) MO.	DAY	YR.	ORIFICE SIZE		METER RUN SIZE		COEFFICIENT		GRAVITY (SEP.)		METER DIFF. RANGE	METER PRESSURE		DIFFERENTIAL ROOTS		METER TEMP.	WELL HEAD TEMP.	FLOWING TSG/CSG PRESSURE		STATIC TSG/CSG PRESSURE		FLOWING STRING TUBING	CASING
11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 — 27		28 — 32		33 — 38		39 — 42		43 — 45	46 — 51		52 — 55		56 — 58	59 — 61	62 — 67		68 — 73		74	75
X X	X X	X X	X X	X X	X X	X X	X X X	X X	X X X	X X X X X	X	X	X X X	X X X	X X X X X	X	X X	X X	X X X	X X X	X X X X X	X	X X X X X	X	X	X
06	22	82	06	29	82	00	500	[illegible]	[illegible]	01219	0	0	602	[illegible]	00676	0	02	00	090		[illegible]	0	00688	0	[illegible]	X

SHUT-IN TEST

WELL-OFF (SHUT-IN) MO.	DAY	YR.	PRESSURE TAKEN DATE MO.	DAY	YR.	CASING PRESSURE (PSIG)		TUBING PRESSURE (PSIG)		SLOPE		EFFECTIVE DIAMETER		EFFECTIVE LENGTH	GRAVITY (RAW GAS)		EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23 — 28		29 — 34		35 — 38		39 — 44		45 — 49	50 — 53		54	55
X X	X X	X X	X X	X X	X X	X X X X X	X	X X X X X	X	X	X X X	X X	X X X X	X X X X X	X	X X X	E	E
06	29	82	07	02	82	01199	0				[illegible]	[illegible]	[illegible]	[illegible]				

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H. K. Nash

OPERATOR: C. G. Johnson

COMMISSION:

94401 00500

REMARKS:

FORM CIG 4896-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
560-01-11	NATURAL BUTTES	2915	COASTAL OIL & GAS CORPORATION	UTE TRAIL (M) -1

WELL CODE	SECT.	LOCATION TWNSHP/BLK	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	K-FACTOR	FORMATION		
94460	8	10S	22E			MESAVERDE	FLOW TEST	1

FLOW TEST

WELL ON (OPEN) MO.	DAY	YR.	DATE (COMP.) MO.	DAY	YR.	ORIFICE SIZE	METER RUN SIZE	COEFFICIENT	GRAVITY (SEP.)	METER DIFF. RANGE	METER PRESSURE	DIFFERENTIAL ROOTS	METER TEMP.	WELL HEAD TEMP.	FLOWING TBG/CSG PRESSURE	STATIC TSG/CSG PRESSURE	FLOWING STRING TUBING	CASING
11-12	13-14	15-16	17-18	19-20	21-22	23-27	28-32	33-38	39-42	43-45	46-51	52-55	56-58	59-61	62-67	68-73	74	75
XX	XX	XX	XX	XX	XX	XX XXX	XX XXX	XXXXX X	X XXX	XXX	XXXXX X	XX XX	XXX	XXX	XXXXX X	XXXXX X	X	X
							2 067			100								

SHUT-IN TEST

WELL-OFF (SHUT-IN) MO.	DAY	YR.	PRESSURE TAKEN MO.	DAY	DATE YR.	CASING PRESSURE (PSIG)	TUBING PRESSURE (PSIG)	SLOPE	EFFECTIVE DIAMETER	EFFECTIVE LENGTH	GRAVITY (RAW GAS)	EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23-28	29-34	35-38	39-44	45-49	50-53	54	55
XX	XX	XX	XX	XX	XX	XXXXX X	XXXXX X	X XXX	XX XXXX	XXXXX	X XXX	E	E
								579	2 4410	7357			

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H. K. Nash

OPERATOR:

COMMISSION:

METER STAMP

REMARKS: Temp. Disc.

FORM CIG 4895-7/73

COLORADO INTERSTATE GAS COMPANY
WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
560-01-11	NATURAL BUTTES	2915	COASTAL OIL & GAS CORPORATION	UTE TRAIL (W) 1

WELL CODE	SECT.	LOCATION TWN.	LOCATION RGE./BLK.	FARMANDLE/REDCAVE SEQ. NUMBER	FARMANDLE/REDCAVE K-FACTOR	FORMATION		
94401	8	10S	22E			WASATCH SA	FLOW TEST	1

FLOW TEST

WELL ON (OPEN) MO.	WELL ON (OPEN) DAY	WELL ON (OPEN) YR.	DATE (CORR.) MO.	DATE (CORR.) DAY	DATE (CORR.) YR.	ORIFICE SIZE	METER RUN SIZE	COEFFICIENT	GRAVITY (SEP.)	METER DIFF RANGE	METER PRESSURE	DIFFERENTIAL ROOTS	METER TEMP.	WELL HEAD TEMP.	FLOWING TBG/CSG PRESSURE	STATIC TSG/CSG PRESSURE	FLOWING STRING TUBING	FLOWING STRING CASING
11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 ——— 27	28 ——— 32	33 ——— 38	39 — 42	43 — 45	46 ——— 51	52 ——— 55	56 — 58	59 — 61	62 ——— 67	68 ——— 73	74	75
XX	XX	XX	XX	XX	XX	XX XXX	XX XXX	XXXXX X	X XXX	XXX	XXXXX X	XX XX	XXX	XXX	XXXXX X	XXXXX X	X	X
							2 067			100								

SHUT-IN TEST

WELL-OFF (SHUT-IN) MO.	WELL-OFF (SHUT-IN) DAY	WELL-OFF (SHUT-IN) YR.	PRESSURE TAKEN MO.	PRESSURE TAKEN DAY	PRESSURE TAKEN YR.	CASING PRESSURE (PSIG)	TUBING PRESSURE (PSIG)	SLOPE	EFFECTIVE DIAMETER	EFFECTIVE LENGTH	GRAVITY (RAW GAS)	EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23 ——— 28	29 ——— 34	35 ——— 38	39 ——— 44	45 ——— 49	50 — 53	54	55
XX	XX	XX	XX	XX	XX	XXXXX X	XXXXX X	X XXX	XX XXXX	XXXXX	X XXX	E	E
								624	3 4509	6209			

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H. K. Nash

OPERATOR:

COMMISSION:

REMARKS: Temp. Disc.

FORM CIG 4896-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
1-01-11	NATURAL BUTTES	2215	GAS PRODUCTION ENTERPRISES, INC	UTE TRAIL (W) 1

WELL CODE	SECT.	LOCATION TWNSHP/BLK.	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	PANHANDLE/REDCAVE K-FACTOR	FORMATION	
34401	5	10S	22E			WASATCH SA	FLOW TEST

WELL ON (OPEN) MO.	WELL ON (OPEN) DAY	WELL ON (OPEN) YR.	DATE (COMP.) MO.	DATE (COMP.) DAY	DATE (COMP.) YR.	ORIFICE SIZE	METER RUN SIZE	COEFFICIENT	GRAVITY (SEP.)	METER DIFF. RANGE	METER PRESSURE	DIFFERENTIAL ROOTS	METER TEMP.	WELL HEAD TEMP.	FLOWING TBG/CSG PRESSURE	STATIC TSG/CSG PRESSURE	FLOWING STRING TUBING	FLOWING STRING CASING
11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 ——— 27	28 ——— 32	33 ——— 38	39 — 42	43 ——— 45	46 ——— 51	52 ——— 55	56 ——— 58	59 — 61	62 ——— 67	68 ——— 73	74	75
XX	XX	XX	XX	XX	XX	XXXX	XXXX	XXXXX X	X XXX	XXX	XXXXX X	XX XX	XXX	XXX	XXXXX X	XXXXX X	X	X
							2.067			100								

WELL-OFF (SHUT-IN) MO.	WELL-OFF (SHUT-IN) DAY	WELL-OFF (SHUT-IN) YR.	SHUT-IN TEST PRESSURE TAKEN MO.	PRESSURE TAKEN DAY	PRESSURE TAKEN YR.	DATE	CASING PRESSURE (PSIG)	TUBING PRESSURE (PSIG)	SLOPE	EFFECTIVE DIAMETER	EFFECTIVE LENGTH	GRAVITY (RAW GAS)	EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23 ——— 28	29 ——— 34	35 ——— 38	39 ——— 44	45 ——— 49	50 ——— 53	54	55	
XX	XX	XX	XX	XX	XX	XXXXX X	XXXXX X	X XXX	XX XXXX	XXXXX	X XXX	E	E	
								624	3.4507	.6207				

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H K Nash

OPERATOR:

COMMISSION:

REMARKS:

This well is on temporary disconnect

FORM CIG 4898-7/73

COLORADO INTERSTATE GAS COMPANY

WELL TEST DATA FORM

STATE COPY

FIELD CODE	FIELD NAME	OPERATOR CODE	OPERATOR NAME	WELL NAME
01-11	NATURAL BUTTES	2915	GAS PRODUCING ENTERPRISES, INC	UTE TRAIL (M) 1

WELL CODE	SECT.	LOCATION TWNSHP/BLK	RGE/SUR.	PANHANDLE/REDCAVE SEQ. NUMBER	PANHANDLE/REDCAVE K-FACTOR	FORMATION		
3-7		10S	22E			MESAVERDE	FLOW TEST	1

FLOW TEST

WELL ON (OPEN) MO.	WELL ON (OPEN) DAY	WELL ON (OPEN) YR.	DATE (COMP.) MO.	DATE (COMP.) DAY	DATE (COMP.) YR.	ORIFICE SIZE	METER RUN SIZE	COEFFICIENT	GRAVITY (SEP.)	METER DIFF. RANGE	METER PRESSURE	DIFFERENTIAL ROOTS	METER TEMP.	WELL HEAD TEMP.	FLOWING TBG/CSG PRESSURE	STATIC TBG/CSG PRESSURE	FLOWING STRING TUBING	FLOWING STRING CASING
11 - 12	13 - 14	15 - 16	17 - 18	19 - 20	21 - 22	23 ——— 27	28 ——— 32	33 ——— 38	39 — 42	43 — 45	46 ——— 51	52 ——— 55	56 — 58	59 — 61	62 ——— 67	68 ——— 73	74	75
XX	XX	XX	XX	XX	XX	XXX	XXX	XXXXX X	X XXX	XXX	XXXXX X	XX XX	XXX	XXX	XXXXX X	XXXXX X	X	X
							2.067			2.500								

SHUT-IN TEST

WELL-OFF (SHUT-IN) MO.	WELL-OFF (SHUT-IN) DAY	WELL-OFF (SHUT-IN) YR.	PRESSURE TAKEN MO.	PRESSURE TAKEN DAY	DATE YR.	CASING PRESSURE (PSIG)	TUBING PRESSURE (PSIG)	SLOPE	EFFECTIVE DIAMETER	EFFECTIVE LENGTH	GRAVITY (RAW GAS)	EST CSG PRESS	EST TBG PRESS
11-12	13-14	15-16	17-18	19-20	21-22	23 ——— 28	29 ——— 34	35 ——— 38	39 ——— 44	45 ——— 49	50 — 53	54	55
XX	XX	XX	XX	XX	XX	XXXXX X	XXXXX X	X XXX	XX XXXX	XXXXX	X XXX	E	E
								.579	2.4410	7357			

TO THE BEST OF MY KNOWLEDGE THE ABOVE DATA IS CORRECT.

CIG: H. K. Nash

OPERATOR:

COMMISSION:

METER STRUCTURE

REMARKS:

This well is on temporary disconnect

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: U-01196

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

7. UNIT AGREEMENT NAME: UTE TRAIL UNIT

2. NAME OF OPERATOR: GAS PRODUCING ENTERPRISES, INC.

8. FARM OR LEASE NAME:

3. ADDRESS OF OPERATOR: P.O. BOX 749 - DENVER, COLORADO 80201

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface

660' FNL & 660' FEL
SECTION 8, T10S, R22E

10. FIELD AND POOL, OR WILDCAT: BITTER CREEK FIELD

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SECTION 8, T10S, R22E

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH	13. STATE
	4999' - GL	UINTAH	UTAH

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			☐
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

This application is to request approval to dispose of produced waters in an unlined pit. The subject well produces less than 3 barrels of water per day. The attached water analysis gives the composition of produced waters. Water is produced from the Wasatch-Mesaverde formation. The evaporation rate for the area compensated for annual rainfall is 70 inches per year. The percolation rate is 2-6 inches per hour for the area. The pit itself is 30 square feet at the surface, tapering down to a total depth of 25 square feet on bottom, having a depth of 6½ feet. See the attached maps for location of well site and data on usable water aquifers.

Attachments: (1) Water analysis
(2) Topo map

In the Natural Buttes Unit, electric logs are not run above 2000-2500'. While drilling the surface holes on all of the wells in the unit, various stringers of sand are encountered which contain a small amount of water. No water flows are encountered while drilling at these depths. No major water aquifers are known to exist down to depth of 2500'. The small sand stringers encountered while drilling are not correlative from well to well.

18. I hereby certify that the foregoing is true and correct

SIGNED T. R. Midkiff TITLE District Superintendent DATE July 1, 1977

(This space for Federal or State office use)

APPROVED BY ____ TITLE ____ DATE ____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING
DATE: August 9, 1977
BY: P. L. Driscoll

*See Instructions on Reverse Side

07 01 33 (REV. 12/76)

STATE OF UTAH

EXECUTIVE DEPARTMENT

Office of Lt. Governor/Secretary of State

AMENDED CERTIFICATE OF AUTHORITY

OF

COASTAL OIL & GAS CORPORATION

I, DAVID S. MONSON, Lt. Governor/Secretary of State of the State of Utah, hereby certify that duplicate originals of an Application of

COASTAL OIL & GAS CORPORATION
GAS PRODUCING ENTERPRISES, INC. formerly

for an Amended Certificate of Authority

duly signed and verified pursuant to the provisions of the Utah Business Corporation Act, have been received in my office and are found to conform to law.

ACCORDINGLY, by virtue of the authority vested in me by law, I hereby issue this Amended Certificate of Authority to

COASTAL OIL & GAS CORPORATION

to transact business in this State

and attach hereto a duplicate original of the Application for such Amended Certificate.

File No. #49324

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of Utah at Salt Lake City, this 4th *day of* April *A.D. 19*80

David S. Monson

LT. GOVERNOR/SECRETARY OF STATE

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other

2. NAME OF OPERATOR
Coastal Oil & Gas Corporation

3. ADDRESS OF OPERATOR
P. O. Box 749, Denver, CO 80201

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660' FNL & 660' FEL
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same

5. LEASE
U-01196-C

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
Natural Buttes

9. WELL NO.
Ute Trail #1

10. FIELD OR WILDCAT NAME
Natural Buttes Field

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 8-T10S-R22E

12. COUNTY OR PARISH: Uintah | 13. STATE: Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
4999' Gr.

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) NTL-2B Unlined Pit			

Approved
Denied

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

This application is to request approval to dispose of produced waters in an unlined pit with a bentonite seal. The subject well produces less than two BWPD. The attached water analysis gives the composition of produced waters. Water is produced from the Wasatch-Mesaverde formation. The evaporation rate for the area compensated for annual rainfall is 70 inches per year. The percolation rate is 2-6 inches per hour for the area. The pit itself is 30' x 30' at the surface, tapering down to 25' x 25', having a depth of 6-1/2 feet. See the attached map for location of well site. The pit is located at the well site.

The areal extent and depth of waters containing less than 10,000 ppm TDS is unknown. The cement for the 4-1/2" casing is brought back near surface which protects all surface waters.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

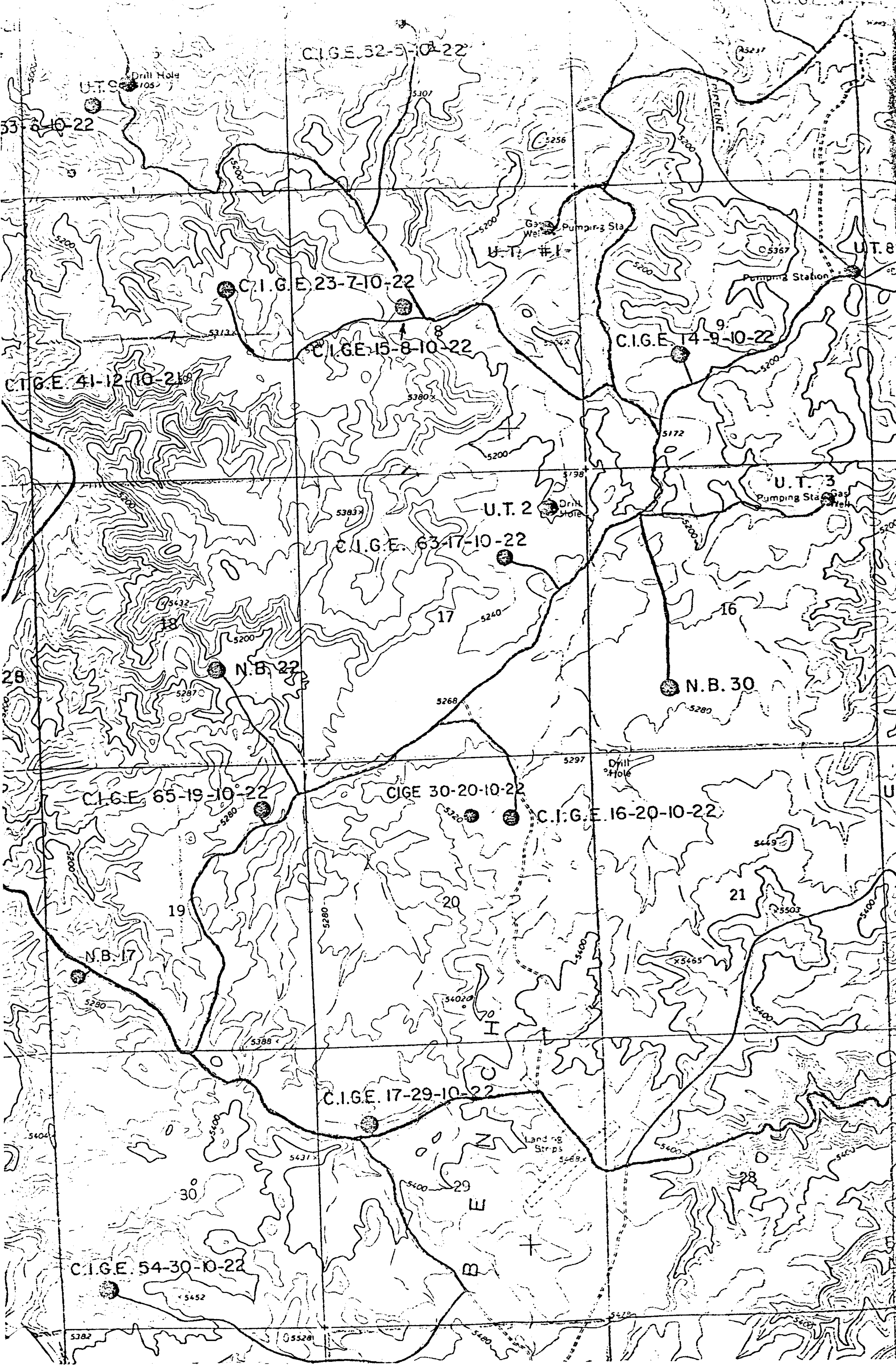
SIGNED E R Midkiff F. R. Midkiff TITLE Production Superintendent DATE August 18, 1980

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

T10S - R22E


C.I.G.E. 62-5-10-22
U.T.S
Drill Hole
Gas Well
Pumping Sta
U.T. #1
PIPELINE
U.T. 8
Pumping Station
C.I.G.E. 23-7-10-22
C.I.G.E. 15-8-10-22
C.I.G.E. 14-9-10-22
C.I.G.E. 41-12-10-21
U.T. 2
Drill Hole
U.T. 3
Pumping Sta
Gas Well
C.I.G.E. 63-17-10-22
N.B. 22
N.B. 30
Drill Hole
C.I.G.E. 65-19-10-22
CIGE 30-20-10-22
C.I.G.E. 16-20-10-22
N.B. 17
C.I.G.E. 17-29-10-22
Landing Strips
C.I.G.E. 54-30-10-22

MURD TA'D PER 12-83
PROD REPORT.

Form OGC-1b

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

070316

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR: Coastal Oil & Gas Corporation

3. ADDRESS OF OPERATOR: P.O. Box 749, Denver, Colorado 80201-0749

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 660' FNL & 660' FEL

5. LEASE DESIGNATION AND SERIAL NO.: U-01196-C

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tribe Surface

7. UNIT AGREEMENT NAME: Natural Buttes Unit

8. FARM OR LEASE NAME: Ute Trail

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Bitter Creek Field

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 8, T10S, R22E

14. PERMIT NO.: 43-047-15377

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4999' GR

12. COUNTY OR PARISH: Uintah

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Notice of TA			X
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Due to present market conditions and current production rates, the decision has been made to shut this well in and classify it as temporarily abandoned on 3/25/86.

RECEIVED
JUN 20 1986
DIVISION OF
OIL, GAS & MINING

For State records, this should be treated as SI.

7-7-86

18. I hereby certify that the foregoing is true and correct

SIGNED Vince Guinn (Vince E. Guinn) TITLE Production Engineer DATE 6/18/86

(This space for Federal or State office use)

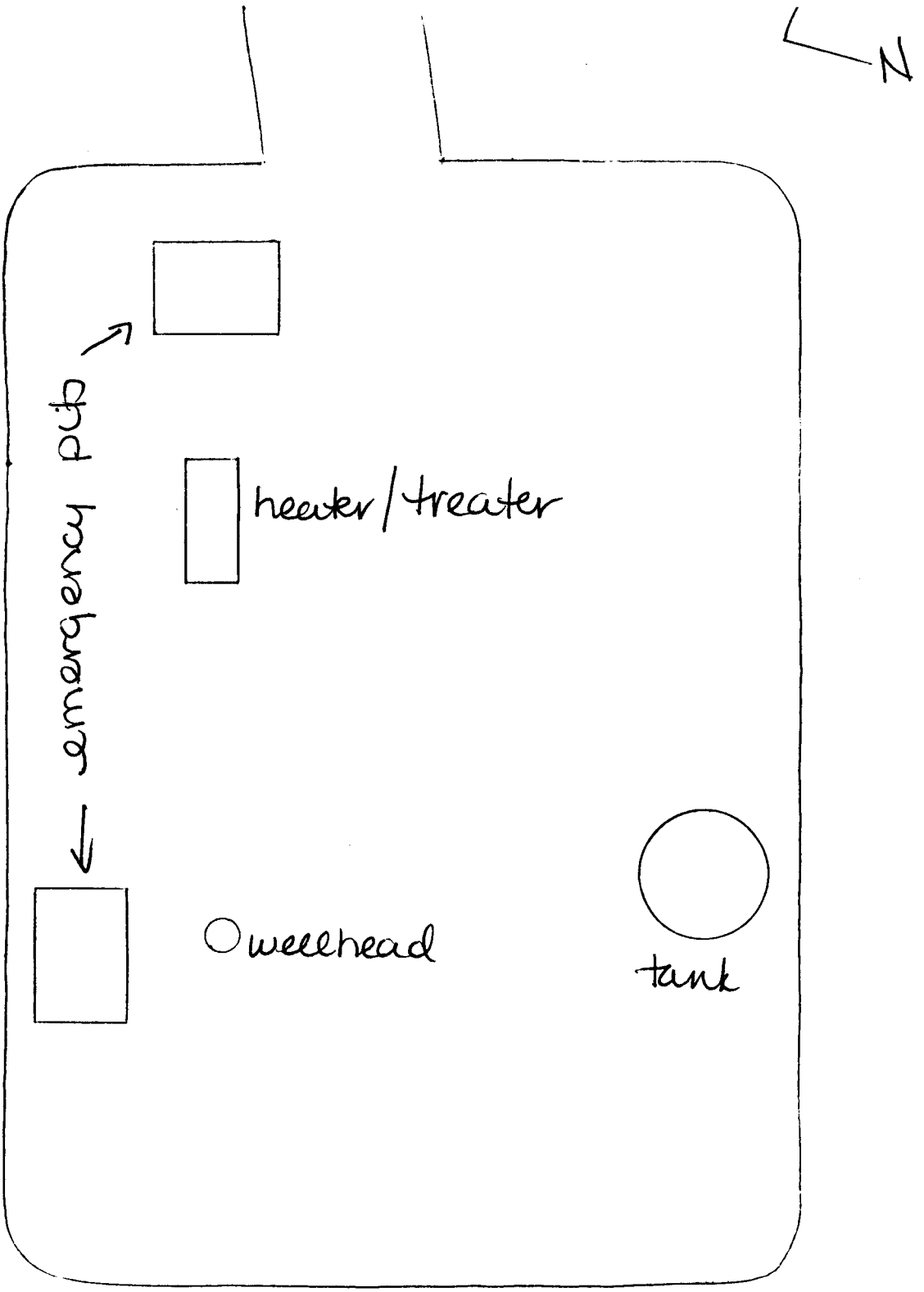
APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

59

Ute Trail U #1 Sec 8, T10S, R22E Duchesne 1/11/89



Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U 01196-C

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tribe Surface

7. UNIT AGREEMENT NAME: Natural Buttes Unit

8. FARM OR LEASE NAME: Ute Trail

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Natural Buttes Field

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 3, T10S, R22E

12. COUNTY OR PARISH: Uintah

13. STATE: UT

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
DEC 04 1989
DIVISION OF OIL, GAS & MINING

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR: Coastal Oil & Gas Corporation

3. ADDRESS OF OPERATOR: P.O. Box 749, Denver, CO 80201-0749

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 660' FNL & 660' FEL

14. PERMIT NO.: N3-047-15377

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 4999' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☒	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other)				(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

See attached intended plug and abandon procedures for the above referenced well. We are planning to plug twenty-two wells between December 1, 1989 and February 15, 1990. Your expediency in processing these sundry notices would be appreciated.

OIL AND GAS	
DRN	RJF
JRB ✓	GLH
DTS	SLS
2-TAS	
3. MICROFILM ✓	
4. FILE	

18. I hereby certify that the foregoing is true and correct

SIGNED Brenda W. Swank TITLE Regulatory Analyst DATE 11-29-89

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Federal approval of this action is required before commencing operations

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 12-8-89
BY: John R. Baza

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

P&A PROCEDURE

UTE TRAIL #1
NATURAL BUTTES
UINTAH COUNTY, UTAH

WELL DATA

Location: 660' FNL & 660' FEL, Sec. 8, T10S, R22E
Elevation: GL = 5121' KB = 5132'
TD: 8270' PBTD: 8264'
Casing: 13-3/8", CSA 284', cmt w/225 sx
7" 23.3# N-80 & J-55, CSA 7974', cmt w/1730 sx
5" 17.9# N-80 Hydril LSA 7631-8264', cmt w/75 sx
Tubing: 2-7/8" 6.5# N-80 tubing

Casing Properties:

Description	ID	Drift	Capacity	Burst	Collapse
7" 23.3# N-80	6.366	6.241	.0393 bbl/ft	6340	3830
7" 23.3# J-55	6.366	6.241	.0393 bbl/ft	4360	3270
5" 17.9# N-80 Hydril	4.276	4.151	.0177 bbl/ft	10,140	10,490
2-7/8" 6.5# N-80	2.441	2.347	.00579 bbl/ft	10,570	11,160

Perforations: See attached perforation list.

PROCEDURE

1) MIRU well servicing company.

2) ND wellhead, NU BOPE. TOH w/2-7/8" tubing, packer and seal assembly. Strap tubing.

3) TIH w/2-7/8" tubing and cement retainer. Set retainer at 5000'. Rig up service company. Cement squeeze perforations 5061-8110' w/1000 sxs of CL "G" cement. Unsting from packer, leaving 5 sx cement on top of retainer.

4) Pressure test casing to 500 psi. If casing does not hold, notify Denver office. TOH w/tubing.

5) RU wireline company. Run CBL log.

6) If cement top is below 3000', perforate 7" casing at 2500'. TIH with cement retainer on 2-7/8" tubing. Set retainer at 2400'. Cement squeeze perforations with 300 sx CL "G" cement. Unsting from retainer leaving 5 sx cement on top.

7) If cement top is above 3000', TIH with 2-7/8" tubing open ended to 3000'. Set 35 sx CL "G" cement at 3000'. TOH w/tubing.

8) ND BOPE, cut off casing. Spot 20 sx CL "G" cement plug at surface.

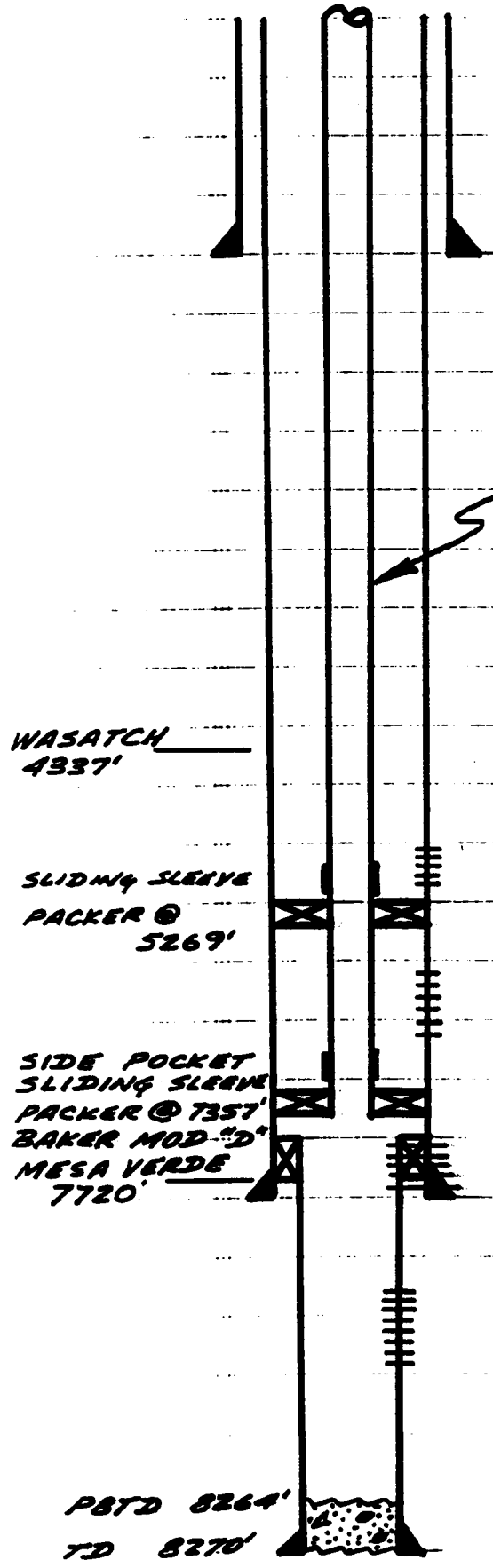
9) Weld on cap. Erect dry hole marker showing company name, well name, location and lease number.

UTE TRAIL #1
UINTAH COUNTY, UTAH

LIST OF PERFORATIONS

8078-8110
8040-8050
7920-7940
7885-7905
7831-7840
7798-7817
7720-7750
7320-7340
7062-7082
7004-7036
6747-6770
6722-6730
5242-5262
5055-5091

WELL SCHEMATIC
UTE TRAIL #1
UINTAH COUNTY, UTAH



13 3/8" CSA 284' CMT W/ 225 SX

2 7/8" 6.5# TUBING

WASATCH 4337'

PERFORATIONS: 5060-81', 5242-62'

SLIDING SLEEVE

PACKER @ 5269'

PERFORATIONS: 6722-30', 6747-70; 7004-3
7062-82', 7320-40'

SIDE POCKET SLIDING SLEEVE

PACKER @ 7357'

BAKER MOD "D"

PERFORATIONS: 7720-50'; 7798-817'; 7885-
7905'; 7931-40'; 7980-40'

MESA VERDE 7720'

7" 23.3# N-80 & J-55 CSA 7974'
CMT W/ 1730 SXS

PERFORATIONS: 7980-40'; 8040-50';
8078-110'

PBTD 8264'

TD 8270'

5" 17.9# N-80 HYDRIL LINER
7631'-8264' CMT W/ 75 SX

Form 3160-5
December 1989

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires September 30, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

RECEIVED
JUN 04 1990
DIVISION OF
OIL, GAS & MINING

5. Lease Designation and Serial No.
U-01196-C

6. If Indian, Allottee or Tribe Name
Ute Indian Tribe

7. If Unit or C.A. Agreement Designation
Natural Buttes Unit

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Ute Trail #1

2. Name of Operator
Coastal Oil & Gas Corporation

9. API Well No.
43-047-15377

3. Address and Telephone No.
P. O. Box 749, Denver, Colorado 80201-0749 (303) 573-4476

10. Field and Pool, or Exploratory Area
Natural Buttes Field

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
660' FNL & 660' FEL (NE/4, NE/4)
Section 8, T10S-R22E

11. County or Parish, State
Uintah, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☒ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other	

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Please see attached chronological report for the plug and abandon procedure performed on the above-referenced well.

OIL AND GAS
RJF
GLH
SLS
1-DME
2- MICROFILM
3- FILE

14. I hereby certify that the foregoing is true and correct
Signed Eileen Danni Dey Title Regulatory Analyst Date May 30, 1990
(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

THE COASTAL CORPORATION
PRODUCTION REPORT

CHRONOLOGICAL HISTORY

UTE TRAIL #1 (P&A)
NATURAL BUTTES UNIT
UINTAH COUNTY, UTAH
WI: 85.223% COGC AFE: 12404
TD: 8270' PBTD: 8264'
CWC(M$): $18.0

5/15/90 MIRU Pool #298. Kill well w/110 bbl 9# brine. Work on tree & WH 4 hrs. WH is rusted together, will not come off. Note: Paul Breshears in Farmington for several days.
DC: $3,550 TC: $3,550

5/21/90 Well flwg to pit. Kill well w/120 bbl 9 ppg brine. Cut bolts and WH off w/cutting torch. NU BOP. RU OWP. Cut off tbg @ 5042'. SDFN.
DC: $4,200 TC: $7,750

5/22/90 Well flwg to pit. Kill w/160 bbl of 9# brine. POOH w/2-7/8" tbg. RIH w/cmt retainer. Test tbg to 2000 psi. Held OK. Test csg to 500 psi. Held OK. Set retainer @ 4975'. Pump 200 sx Class "G" cmt. Left 10 sx on top of retainer. Final rate - .9 BPM @ 1500 psi. POOH. RU OWP. Run CBL from 1700' to above 100'. Had cmt to above 100'. SDFN.
DC: $7,440 TC: $15,190

5/23/90 Well dead. RIH to 2187'. Spot 50 sx Class "G". Estimated cmt top @ 1931'. POOH to 1247'. Spot 35 sx Class "G", est top @ 1067'. POOH to 340'. Fill 7" w/75 sx. Cut off head. Fill 13-3/8" & 7" w/36 sx. Weld on dry hole marker. RD & MO. Plugs witnessed by Bill Owens - BLM. Final report.
DC: $6,680 TC: $21,870

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: U-01196-C
6. If Indian, Allottee or Tribe Name: N/A
7. If Unit or CA, Agreement Designation: Natural Buttes Unit
8. Well Name and No.: Ute Trail #1
9. API Well No.: 43-047-15377
10. Field and Pool, or Exploratory Area: Natural Buttes
11. County or Parish, State: Uintah County, Utah

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other
2. Name of Operator: Coastal Oil & Gas Corporation
3. Address and Telephone No.: P. O. Box 749 Denver, CO 80201-0749 (303) 573-4476
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 660' FNL & 660' FEL (NE/NE) Section 8, T10S-R22E

APR 13 1992
DIVISION OF OIL GAS & MINING

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☒ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☒ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above referenced location has been reclaimed and seeded per BLM specifications and is now ready for final inspection.

14. I hereby certify that the foregoing is true and correct
Signed Kathleen Danni Dey Title Regulatory Analyst Date 4/8/92
(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

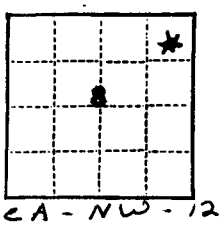
API #43-047-15377

Form 9-593
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CONSERVATION DIVISION

RECEIVED
JAN 12 1993
DIVISION OF OIL, GAS & MINING

Sec. 8
T. 10 S.
R. 22 E.
S. L. Mer.



CA - NW - 120

INDIVIDUAL WELL RECORD

PUBLIC LAND: Date August 9, 1966 Ref. No. 4

Land office Utah — State Utah

Serial No. 01196-C — County Uintah

Lessee DEPCO, Inc. — Field Bitter Creek *

Operator ~~DEPCO, Inc.~~ Coastal Oil & Gas — District Salt Lake City

Well No. 1 — Subdivision C NE¼NE¼

Location 660' from N. line and 660' from E. line of sec. 8

Drilling approved February 11, 1959 — Well elevation 5009 DF 4999 Gr. feet

Drilling commenced February 14, 1959 — Total depth 8267 feet

Drilling ceased April 16, 1959 — Initial production Tw 3,000 MCFGPD Kmv 4,000 MCFGPD

Completed for production Sept. 21, 1959 — Gravity A. P. I.

Abandonment approved Dec. 25, 1992 — Initial R. P.

Geologic Formations		Productive Horizons		
Surface	*Lowest tested*	*Name*	*Depths*	*Contents*
Uinta	Mesaverde	Wasatch	5060', 5081', 5242-62'	Gas
		Mesaverde	6722-8110' (Gross)*	Gas

WELL STATUS

YEAR	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1959		Drlg	Drlg	Drlg	Tstg	Tstg	Tstg	Tstg	GSI			
1961		OWWO		GSI							PGW	
1990			NIA			SRA						
1992												P+A

REMARKS * Perfs: 6722-30, 6747-70, 7004-36, 7062-82, 7320-40, 7720-50, 7798-7817, 7831-40, 7885-7905, 7920-40, 8040-60, 8078-8110'

Formerly Ute Trail (Unit) - terminated 7-1-64

Committed to C.A. NW-120

DUAL COMPLETION

(REPLACEMENT)

☆ U.S. GOVERNMENT PRINTING OFFICE : 1964—O-746-789
GPO 893-866

(OVER)

WESTPORT OIL AND GAS COMPANY, L.P.

410 Seventeenth Street #2300 Denver Colorado 80202-4436
Telephone: 303 573 5404 Fax: 303 573 5609

February 1, 2002

Department of the Interior
Bureau of Land Management
2850 Youngfield Street
Lakewood, CO 80215-7093
Attention: Ms. Martha Maxwell

RE: BLM Bond CO-1203
BLM Nationwide Bond 158626364
Surety – Continental Casualty Company
Belco Energy Corporation merger into Westport Oil and Gas Company, Inc.
Conversion of Westport Oil and Gas Company, Inc., into Westport Oil and Gas Company, L.P.
Assumption Rider – Westport Oil and Gas Company, L.P.

Dear Ms. Maxwell:

Pursuant to our recent conversations, please find the following list of enclosures for the BLM's consideration and approval:

Two (2) Assumption Riders, fully executed originals.
Copies of Belco Energy Corporation merger into Westport Oil and Gas Company, Inc.
Copies of Westport Oil and Gas Company, Inc., conversion into Westport Oil and Gas Company, L.P.
List of all Federal/BIA/State Leases - Belco/Westport's leases – in all states.

Please inform us of any additional information needed to complete the change to Westport Oil and Gas Company, L.P., as operator of record.

I thank you for your assistance and cooperation in this matter. Please do not hesitate contacting the undersigned, should a question arise.

Sincerely,
Westport Oil and Gas Company, L.P.

Debby J. Black

Debby J. Black
Engineer Technician

Encl:

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

RECEIVED
FEB 2 2 2002
DIVISION OF
OIL, GAS AND MINING

In Reply Refer To:
3106
UTU-25566 et al
(UT-924)

FEB 2 1 2002

NOTICE

Westport Oil and Gas Company L.P. : Oil and Gas
410 Seventeenth Street, #2300 :
Denver Colorado 80215-7093 :

Name Change Recognized

Acceptable evidence has been received in this office concerning the name change of Westport Oil and Gas Company, Inc. into Westport Oil and Gas Company, L.P. with Westport Oil and Gas Company, L.P. being the surviving entity.

For our purposes, the name change is recognized effective December 31, 2001.

The oil and gas lease files identified have been noted as to the name change. The exhibit was compiled from a list of leases obtained from our computer program. We have not abstracted the lease files to determine if the entities affected by this name change hold an interest in the leases identified nor have we attempted to identify leases where the entities are the operator on the ground maintaining no vested recorded title or operating rights interests. We will be notifying the Minerals Management Service and all applicable Bureau of Land Management offices of the change by a copy of this notice. If additional documentation for changes of operator are required by our Field Offices, you will be contacted by them.

If you identify additional leases in which the entities maintain an interest, please contact this office and we will appropriately document those files with a copy of this Notice.

Due to the name change, the name of the principal/obligor on the bond is required to be changed from Westport Oil and Gas Company, Inc. to Westport Oil and Gas Company, L.P.. You may accomplish this either by consent of surety rider on the original bond or a rider to the original bond. The bonds are held in Colorado.

UTU-03405
UTU-20895
UTU-25566
UTU-43156
UTU-49518
UTU-49519
UTU-49522
UTU-49523

Robert Lopez
Chief, Branch of
Minerals Adjudication

cc: Moab Field Office
Vernal Field Office
MMS, Reference Data Branch, MS3130, PO Box 5860, Denver CO 80217
State of Utah, DOGM, Attn: Jim Thompson (Ste. 1210), Box 145801, SLC UT 84114
Teresa Thompson (UT-922)
Joe Incardine (UT-921)

UNITED STATES GOVERNMENT

memorandum

Branch of Real Estate Services
Uintah & Ouray Agency

Date: 5 December, 2002

Reply to Attn of: Supervisory Petroleum Engineer

Subject: Modification of Utah Division of Oil, Gas and Mining Regulations

To: Director, Utah Division of Oil, Gas and Mining Division: John Baza

We have been advised of changes occurring with the operation of your database for Change of Operator. You will be modifying your records to reflect Change of Operator once you have received all necessary documentation from the companies involved, and perhaps in advance of our Notice of Concurrence/Approval of Change of Operator where Indian leases are involved.

We have no objection.

With further comment to Rulemaking, I wish to comment concerning the provision of Exhibits for upcoming Hearings. I would like to see the Uintah & Ouray Agency, BIA, and the Ute Indian Tribe, Energy & Mineral Resources Department added to the list of those parties that receive advance Exhibits so as to allow us to have research time prior to Hearing dates. We will be able to provide a more informed recommendation to the Oil, Gas and Mining Board. It would be best if we would receive only those Exhibits that concern Indian lands, specifically on or adjacent to Indian lands. This may be a difficult situation to attain, as it is not always clear where 'on or adjacent' occurs.

I am aware that you have gone to extra effort to correct this matter already, and I fully appreciate it. My request is intended only to allow the addition of Uintah & Ouray Agency and Ute Indian Tribe to the official listing.

We appreciate you concern, and hope that these comments are timely enough for consideration in the revision process.

Charles H Cameron

CC: Minerals & Mining Section of RES
Ute Energy & Mineral Resources Department: Executive Director
chrono

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Washington, D.C. 20240

FEB 1 0 2003

IN REPLY REFER TO:
Real Estate Services

Carroll A. Wilson
Principal Landman
Westport Oil and Gas Company, L.P.
1368 South 1200 East
Vernal, Utah 84078

Dear Mr. Wilson:

This is in response to your request for approval of RLI Insurance Company's Nationwide Oil and Gas Lease Bond No. RLB0005239 executed effective December 17, 2002, ($150,000 coverage) with Westport Oil and Gas Company, L. P., as principal.

This bond is hereby approved as of the date of this correspondence and will be retained in the Bureau of Indian Affairs' Division of Real Estate Services, 1849 C Street, NW, MS-4512-MIB, Washington, D.C. 20240. All Bureau oil and gas regional offices and the surety are being informed of this action.

In cases where you have existing individual and/or collective bonds on file with one or more of our regional offices, you may now request those offices, directly, to terminate in lieu of coverage under this Nationwide Bond.

Enclosed is a copy of the approved bond for your files. If we may be of further assistance in this matter, please advise.

Sincerely,

Director, Office of Trust Responsibilities

ACTING

Enclosure

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME:	
1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER	8. WELL NAME and NUMBER: Exhibit "A"
2. NAME OF OPERATOR: El Paso Production Oil & Gas Company	9. API NUMBER:
3. ADDRESS OF OPERATOR: 9 Greenway Plaza CITY Houston STATE TX ZIP 77064-0995 / PHONE NUMBER: (832) 676-5933	10. FIELD AND POOL, OR WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE:	COUNTY:
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Operator change to Westport Oil and Gas Company, L.P., 1670 Broadway, Suite 2800, Denver, CO. 80202-4800, effective December 17, 2002.

BOND # _____

State Surety Bond No. RLB0005236
Fee Bond No. RLB0005238

RECEIVED
FEB 2 8 2003
DIV. OF OIL, GAS & MINING

EL PASO PRODUCTION OIL & GAS COMPANY

By: _____
Jon R. Nelsen, Attorney-in-Fact

WESTPORT OIL AND GAS COMPANY, L.P.

NAME (PLEASE PRINT) David R. Dix TITLE Agent and Attorney-in-Fact

SIGNATURE _____ DATE 12/17/02

(This space for State use only)

(5/2000) (See Instructions on Reverse Side)

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on reverse side

5. Lease Serial No.
SEE ATTACHED EXHIBIT "A"

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
SEE ATTACHED EXHIBIT "A"

2. Name of Operator
WESTPORT OIL & GAS COMPANY, L.P.

9. API Well No.
SEE ATTACHED EXHIBIT "A"

3a. Address
P.O. BOX 1148 VERNAL, UT 84078

3b. Phone No. *(include area code)*
(435) 781-7023

10. Field and Pool, or Exploratory Area

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SEE ATTACHED EXHIBIT "A"

11. County or Parish, State
UINTAH COUNTY, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other SUCCESSOR OF OPERATOR	
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration the
If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zo
Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30
following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed
testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator
determined that the site is ready for final inspection.

WESTPORT OIL & GAS COMPANY, L.P., IS CONSIDERED TO BE THE OPERATOR ON THE ATTACHED DESCRIBED LANDS AND IS RESPONSIBLE UNDER THE TERMS AND CONDITIONS OF THE LEASE FOR THE OPERATIONS CONDUCTED ON THE LEASED LANDS OR PORTIONS THEREOF. BOND COVERAGE FOR THIS WELL IS PROVIDED BY FEDERAL NATIONWIDE BOND NO. 158626364, EFFECTIVE FEBRUARY 1, 2002, AND BIA NATIONWIDE BOND NO. RLB0005239, EFFECTIVE FEBRUARY 10, 2003.

RECEIVED
MAR 0 4 2003
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
CHERYL CAMERON
Title
OPERATIONS
Signature
Date
March 4, 2003

THIS SPACE FOR FEDERAL OR STATE USE

Approved by
Title
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Office

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. GLH
2. CDW
3. FILE

X Change of Operator (Well Sold) Designation of Agent/Operator

Operator Name Change Merger

The operator of the well(s) listed below has changed, effective: **12-17-02**

FROM: (Old Operator):	**TO:** (New Operator):
EL PASO PRODUCTION OIL & GAS COMPANY	WESTPORT OIL & GAS COMPANY LP
Address: 9 GREENWAY PLAZA	Address: P O BOX 1148
HOUSTON, TX 77064-0995	VERNAL, UT 84078
Phone: 1-(832)-676-5933	Phone: 1-(435)-781-7023
Account No. N1845	Account No. N2115

CA No. **Unit:**

WELL(S)

NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
UTE TRAIL U 1	08-09S-22E	43-047-15377	2903	FEDERAL	GW	PA
NBU 73	17-09S-22E	43-047-31102	99998	FEDERAL	GW	PA
NBU 61	21-09S-22E	43-047-30900	99998	FEDERAL	GW	PA
STATE 1-32	32-09S-22E	43-047-34317	13419	STATE	GW	P
BITTER CREEK 1	34-09S-22E	43-047-15374	99998	FEDERAL	GW	PA
PETES FLAT 1-1	01-10S-23E	43-047-30558	1510	FEDERAL	GW	S
SOUTHMAN CANYON 4-4 (FED)	04-10S-23E	43-047-30632	10690	FEDERAL	GW	P
BONANZA 4-6	04-10S-23E	43-047-34751	99999	FEDERAL	GW	APD
SOUTHMAN CANYON 4-5	05-10S-23E	43-047-30633	6131	FEDERAL	GW	P
SOUTHMAN CANYON 1-5 (UTU-74473)	05-10S-23E	43-047-30856	10689	FEDERAL	GW	P
SAGE HEN FEDERAL 1-6 (CR-3)	06-10S-23E	43-047-30382	1490	FEDERAL	GW	S
FLAT MESA FEDERAL 1-7	07-10S-23E	43-047-30365	1505	FEDERAL	GW	S
FLAT MESA FEDERAL 2-7	07-10S-23E	43-047-30545	1506	FEDERAL	GW	P
SAGEBRUSH FEDERAL 1-8	08-10S-23E	43-047-30383	1467	FEDERAL	GW	TA
BONANZA 8-2	08-10S-23E	43-047-34087	99999	FEDERAL	GW	APD
BONANZA 8-3	08-10S-23E	43-047-34770	99999	FEDERAL	GW	APD
NO NAME CANYON FEDERAL 1-9	09-10S-23E	43-047-30378	1466	FEDERAL	GW	P
NO NAME CANYON FEDERAL 2-9	09-10S-23E	43-047-31504	1468	FEDERAL	GW	P
SOUTHMAN CANYON 9-3-M	09-10S-23E	43-047-32540	11767	FEDERAL	GW	S
SOUTHMAN CANYON 9-4-J	09-10S-23E	43-047-32541	11685	FEDERAL	GW	P

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 02/28/2003
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 03/04/2003
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database on:** 03/06/2003
4. Is the new operator registered in the State of Utah: YES Business Number: 1355743-0181
5. If **NO**, the operator was contacted contacted on: _____

6. (R649-9-2)Waste Management Plan has been received on: IN PLACE

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM-12/31/2003 BIA-12/5/02

8. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 02/27/2003

9. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: 01/09/2003

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 03/27/2003
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 03/27/2003
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

STATE WELL(S) BOND VERIFICATION:

1. State well(s) covered by Bond Number: RLB 0005236

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: 158626364

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: RLB 0005239

FEE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number RLB 0005238

2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

COMMENTS:

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **1/6/2006**

FROM: (Old Operator):	**TO:** (New Operator):
N2115-Westport Oil & Gas Co., LP	N2995-Kerr-McGee Oil & Gas Onshore, LP
1368 South 1200 East	1368 South 1200 East
Vernal, UT 84078	Vernal, UT 84078
Phone: 1-(435) 781-7024	Phone: 1-(435) 781-7024

CA No. **Unit:**

WELL NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 5/10/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 5/10/2006
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 3/7/2006
4a. Is the new operator registered in the State of Utah: YES Business Number: 1355743-0181
4b. If **NO**, the operator was contacted contacted on:
5a. (R649-9-2)Waste Management Plan has been received on: IN PLACE
5b. Inspections of LA PA state/fee well sites complete on: n/a
5c. Reports current for Production/Disposition & Sundries on: ok

6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 3/27/2006 BIA not yet

7. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 3/27/2006

8. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

9. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on:

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 5/15/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 5/15/2006
3. Bond information entered in RBDMS on: 5/15/2006
4. Fee/State wells attached to bond in RBDMS on: 5/16/2006
5. Injection Projects to new operator in RBDMS on:
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a Name Change Only

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: CO1203
2. Indian well(s) covered by Bond Number: RLB0005239
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number RLB0005236

a. The **FORMER** operator has requested a release of liability from their bond on: n/a rider added KMG
The Division sent response by letter on:

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 5/16/2006

COMMENTS:

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires Jnovember 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on reverse side

5. Lease Serial No.
MULTIPLE LEASES

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
MUTIPLE WELLS

2. Name of Operator
KERR-McGEE OIL & GAS ONSHORE LP

9. API Well No.

3a. Address
1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. *(include area code)*
(435) 781-7024

10. Field and Pool, or Exploratory Area

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SEE ATTACHED

11. County or Parish, State
UINTAH COUNTY, UTAH

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other CHANGE OF OPERATOR
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.

PLEASE BE ADVISED THAT KERR-McGEE OIL & GAS ONSHORE LP, IS CONSIDERED TO BE THE OPERATOR OF THE ATTACHED WELL LOCATIONS. EFFECTIVE JANUARY 6, 2006.
KERR-McGEE OIL & GAS ONSHORE LP, IS RESPONSIBLE UNDER TERMS AND CONDITIONS OF THE LEASE(S) FOR THE OPERATIONS CONDUCTED UPON LEASE LANDS. BOND COVERAGE IS PROVIDED BY STATE OF UTAH NATIONWIDE BOND NO. RLB0005237.

RECEIVED
MAY 10 2006
DIV. OF OIL, GAS & MINING

BLM BOND = CO1203
BIA BOND = RLB0005239

APPROVED 5/16/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
RANDY BAYNE	DRILLING MANAGER
Signature	Date
Randy Bayne	May 9, 2006

THIS SPACE FOR FEDERAL OR STATE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires Jnovember 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on reverse side

5. Lease Serial No.
MULTIPLE LEASES

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
MUTIPLE WELLS

2. Name of Operator
WESTPORT OIL & GAS COMPANY L.P.

9. API Well No.

3a. Address
1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. *(include area code)*
(435) 781-7024

10. Field and Pool, or Exploratory Area

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SEE ATTACHED

11. County or Parish, State
UINTAH COUNTY, UTAH

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other CHANGE OF OPERATOR
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.

EFFECTIVE JANUARY 6, 2006, WESTPORT OIL & GAS COMPANY L.P., HAS RELINQUISHED THE OPERATORSHIP OF THE ATTACHED WELL LOCATIONS TO KERR-McGEE OIL & GAS ONSHORE LP.

APPROVED 5/16/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
MAY 10 2006
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
BRAD LANEY	ENGINEERING SPECIALIST
Signature	Date
	May 9, 2006

THIS SPACE FOR FEDERAL OR STATE USE

Approved by	Title	Date
Brad Laney		5-9-06
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Colorado State Office
2850 Youngfield Street
Lakewood, Colorado 80215-7076

IN REPLY REFER TO:
CO922 (MM)
3106
COC017387 et. al.

March 23, 2006

NOTICE

Kerr-McGee Oil & Gas Onshore L.P. :
1999 Broadway, Suite 3700 : Oil & Gas
Denver, CO 80202 :

Merger/Name Change - Recognized

On February 28, 2006 this office received acceptable evidence of the following mergers and name conversion:

> Kerr-McGee Oil & Gas Onshore L.P., a Delaware Limited Partnership, and Kerr-McGee Oil & Gas Onshore LLC, a Delaware Limited Partnership merger with and into Westport Oil and Gas Company L.P., a Delaware Limited Partnership, and subsequent Westport Oil & Gas Company L.P. name conversion to Kerr-McGee Oil & Gas Onshore L.P.

For our purposes the merger and name conversion was effective January 4, 2006, the date the Secretary of State of Delaware authenticated the mergers and name conversion.

Kerr-McGee Oil & Gas Onshore L.P. provided a list of oil and gas leases held by the merging parties with the request that the Bureau of Land Management change all their lease records from the named entities to the new entity, Kerr-McGee Oil & Gas Onshore L.P. In response to this request each state is asked to retrieve their own list of leases in the names of these entities from the Bureau of Land Management's (BLM) automated LR2000 data base.

The oil and gas lease files identified on the list provided by Kerr-McGee Oil & Gas Onshore L.P. have been updated as to the merger and name conversion. We have not abstracted the lease files to determine if the entities affected by the acceptance of these documents holds an interest in the lease, nor have we attempt to identify leases where the entity is the operator on the ground that maintains vested record title or operating rights interests. If additional documentation, for change of operator, is required you will be contacted directly by the appropriate Field Office. The Mineral Management Services (MMS) and other applicable BLM offices were notified of the merger with a copy of this notice

Please contact this office if you identify additional leases where the merging party maintains an interest, under our jurisdiction, and we will document the case files with a copy of this notice. If the leases are under the jurisdiction of another State Office that information will be forwarded to them for their action.

Three riders accompanied the merger/name conversion documents which will add Kerr-McGee Oil and Gas Onshore LLC as a principal to the 3 Kerr-McGee bonds maintained by the Wyoming State Office. These riders will be forward to them for their acceptance.

The Nationwide Oil & Gas Continental Casualty Company Bond #158626364 (BLM Bond #CO1203), maintained by the Colorado State Office, will remain in full force and effect until an assumption rider is accepted by the Wyoming State Office that conditions their Nationwide Safeco bond to accept all outstanding liability on the oil and gas leases attached to the Colorado bond.

If you have questions about this action you may call me at 303.239.3768.

/s/Martha L. Maxwell
Martha L. Maxwell
Land Law Examiner
Fluid Minerals Adjudication

Attachment:
List of OG Leases to each of the following offices:
MMS MRM, MS 357B-1
WY, UT, NM/OK/TX, MT/ND, WY State Offices
CO Field Offices
Wyoming State Office
Rider #1 to Bond WY2357
Rider #2 to Bond WY1865
Rider #3 to Bond WY1127

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
http://www.blm.gov

IN REPLY REFER TO:
3106
(UT-922)

March 27, 2006

Memorandum

To: Vernal Field Office

From: Chief, Branch of Fluid Minerals

Subject: Merger Approval

Attached is an approved copy of the merger recognized by the Bureau of Land Management, Colorado State Office. We have updated our records to reflect the merger from Westport Oil and Gas Company L.P. into Kerr-McGee Onshore Oil and Gas Company. The merger was approved effective January 4, 2006.

Chief, Branch of
Fluid Minerals

Enclosure
Approval letter from BLM COSO (2 pp)

cc: MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225
State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114
Teresa Thompson
Joe Incardine
Connie Seare
Dave Mascarenas
Susan Bauman

RECEIVED
MAR 2 8 2006
DIV. OF OIL, GAS & MINING